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FEMALE ENTREPRENEURS: EUROPE'S UNTAPPED COMPETITIVE EDGE

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Executive Summary

The European Union (EU) has placed competitiveness at the centre of its long-term strategy for economic growth, recognising it as essential for innovation, resilience and global influence. The 2024 report on the future of European competitiveness authored by Mario Draghi (the "Draghi Report") calls for a step change in the EU's approach, emphasising the need to close the innovation gap, unlock investment and address bottlenecks in skills and productivity (European Commission, 2024a). The 2025 Competitiveness Compass provides a roadmap to deliver on this vision – helping to identify key drivers of competitiveness, track progress and guide action across Member States (European Commission, 2024b).

A dynamic and inclusive environment for new business creation is central to this agenda, and the EU has recognised that reducing barriers to entrepreneurship is essential for unlocking innovation and boosting productivity. Recent policy frameworks – including the Start-up and Scale-up Strategy (European Commission, 2025a), the Single Market Strategy (European Commission, 2025b) and the Commission's SME Strategy (European Commission, 2020) – highlight persistent obstacles for potential entrepreneurs such as lack of access to finance and regulatory complexity.

In this context, female entrepreneurship represents a major untapped potential in the EU and in Europe as a whole. To explore this opportunity and its economic implications, Amazon commissioned Frontier Economics to conduct this study. The motivation is clear: women are less likely to set up a firm or be the owner of a young firm than men – the share of 18–64 year old males who are either setting up a firm or are owners of a young firm is higher than the share of their female counterparts across all 13 European countries analysed in this study: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Poland, Spain, Sweden, and the United Kingdom. This gender gap ranges from 21% (in Austria and Ireland) to 88% (in Denmark) and an average of around 40% across the countries analysed.[1]

This study provides new evidence on the potential economic impact of enabling greater gender parity in entrepreneurship in Europe. It examines the barriers that female entrepreneurs face when starting and growing their businesses and explores potential solutions to address them.

Greater gender parity in entrepreneurship could generate significant economic value

This study models the impact of achieving gender parity in entrepreneurship in 13 European countries. Gender parity in entrepreneurship is defined as 50% of new businesses (start-ups) being majority female owned.

Our model shows that achieving gender parity in entrepreneurship would lead to considerable increases in productivity for all 13 countries. This is because many high-potential female-led businesses are currently unable to enter or grow due to structural barriers such as limited

[1] https://www.gemconsortium.org/data

access to finance, weaker networks, and gendered constraints around care and regulation (Huang et al., 2025; GEM, 2024; Foss et al., 2019). These barriers act as a filter, meaning that only the most productive female-led firms tend to survive (Morazzoni & Sy, 2022). Removing them would expand the pool of entrants, intensify competition and reallocate capital and labour toward more productive ventures, resulting in higher average productivity across the business population. Because this reallocation would take place over time, we model:

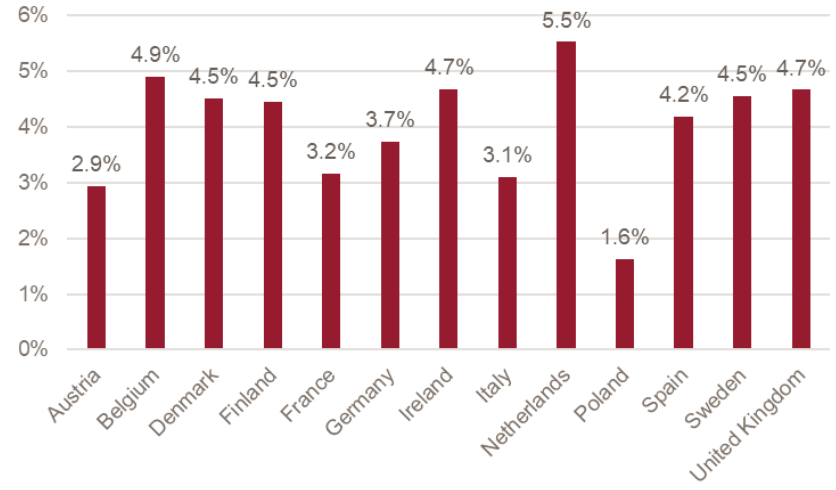
- the impact that achieving gender parity in entrepreneurship would have on productivity and Gross Value Added (GVA) in 2040; and
- the cumulative impact in productivity and GVA that would occur between 2025 and 2040.

We estimate that achieving gender parity in entrepreneurship would lead, by 2040, to a productivity increase that would range between 1.6% (Poland) and 5.5% (Netherlands), relative to current productivity levels, as shown in the figure below.[2] This would be equivalent to an annual productivity increase of 0.11% to 0.36% over a 15-year period. To put this into context, average annual productivity growth in the last 15 years of available data for the 13 countries in this study has ranged between -0.83% (in Italy) and 0.96% (in Poland).[3] The estimated productivity increase resulting from gender parity in entrepreneurship would close up to one-third of the productivity gap between the United States and Europe identified by the Draghi report. Our results therefore suggest that actions to promote female entrepreneurship, and their accessibility to using digital tools, could help revive European productivity growth. Productivity growth is the key driver of economic growth in the long run, allowing for higher living standards.

2 For this study, we estimate the impacts on Total Factor Productivity, which considers improvements in both labour and capital productivity.

3 Source: Frontier Economics calculations based on Penn World Tables for Total Factor Productivity in international US dollars between 2004 and 2019, accessed through Our World in Data: https://ourworldindata.org/grapher/tfp-at-constant-national-prices-20111?country=ESP~GBR~FRA~POL~DNK~ITA~DEU~BEL~AUT~FIN~IRL~NLD~SWE

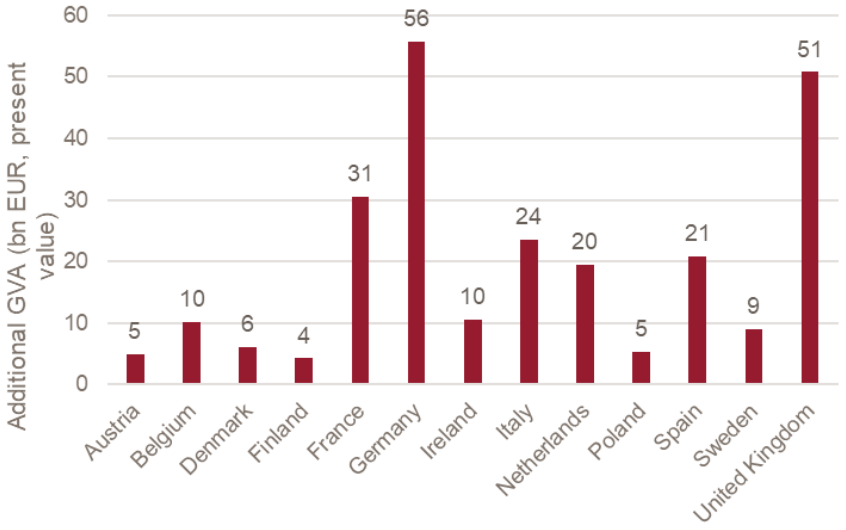
Figure 1 Increase in productivity by 2040 from achieving gender parity in entrepreneurship (as % of current productivity levels)



Source: Frontier Economics

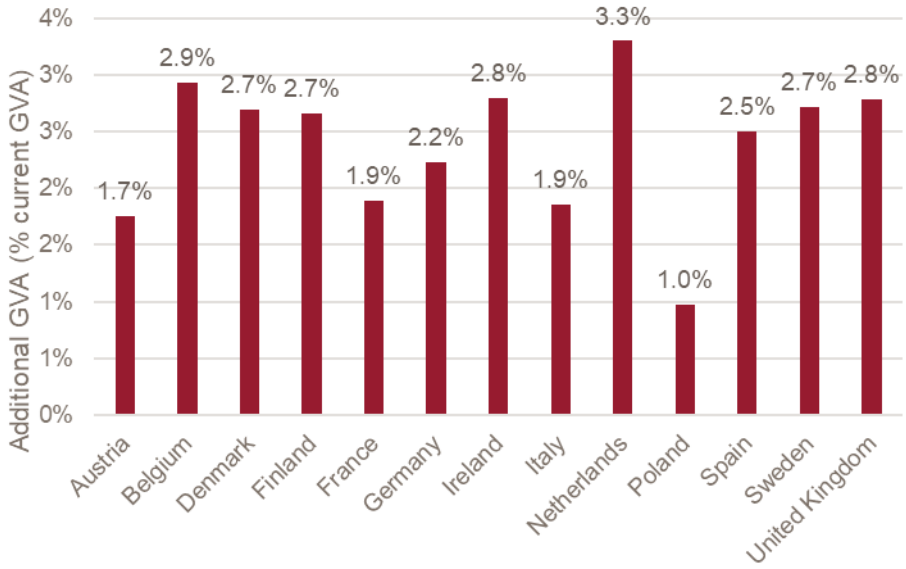
The productivity gains achieved through gender parity in entrepreneurship would translate into substantial additional economic value generated (Gross Value Added, GVA) in all 13 countries considered in this study. By 2040, the present value of the **eventual annual GVA increase (by 2040) would be around €250bn**. This is approximately 2% of the 13 countries' current GVA, and, larger than the EU's annual budget (which ranges around €160bn-€180bn).

Figure 2 Present value of annual increase in GVA with gender parity, 2040



Source: Frontier Economics

Figure 3 Present value of annual increase in GVA with gender parity as share (%) of current GVA, 2040



Source: Frontier Economics

While it would take some time for the reallocation of resources to new businesses, gender parity could generate immediate annual GVA gains. The cumulative gains in GVA between 2025 and 2040 would range between **€56bn in Finland and €825bn in the UK** (expressed in net present value terms). These gains would be higher if gender parity was achieved within five years across all countries, total GVA gains would be 6% to 49% higher across countries.

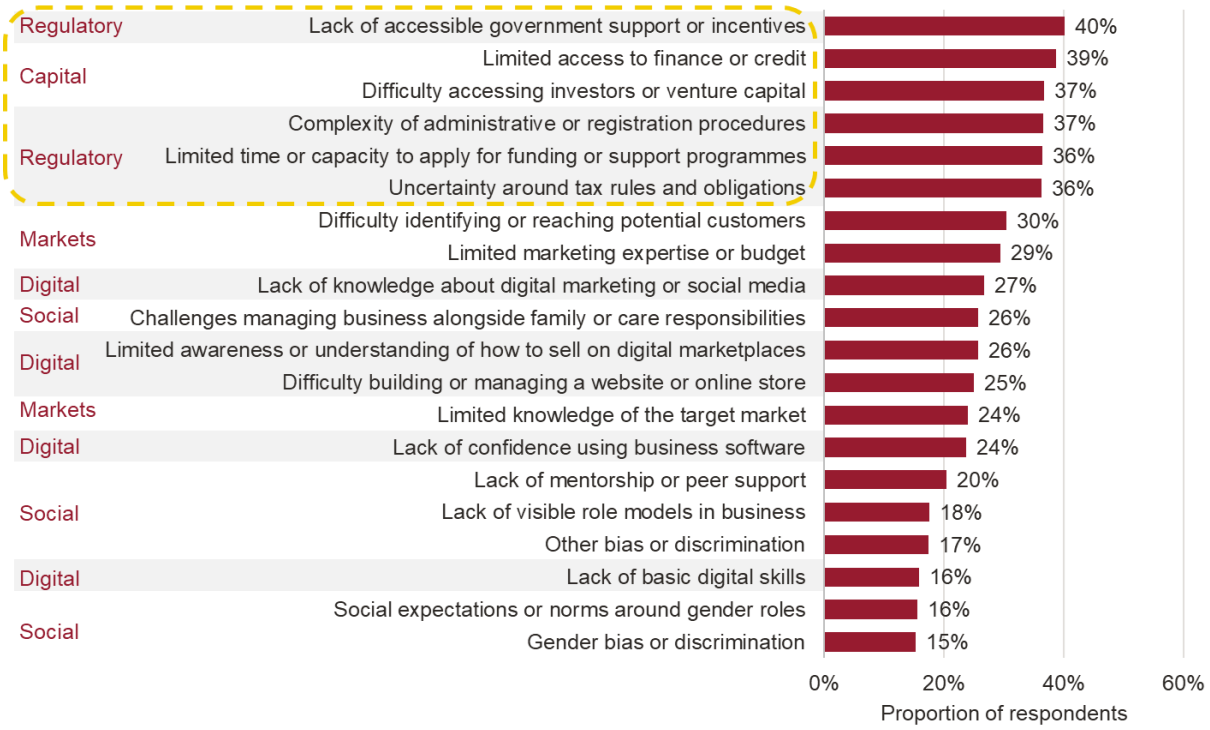
These estimates are likely to be conservative, as the model captures only one channel through which female entrepreneurship can boost economic performance: the entry of new, high-productivity female-led businesses. Other channels, such as productivity gains among existing female-led firms or broader labour market effects, are not quantified.

Difficulties in accessing capital, and navigating regulatory and institutional hurdles, pose significant barriers to female entrepreneurs

We surveyed around 600 female and male entrepreneurs across six countries: Denmark, Finland, France, Germany, Italy, and Poland. The survey asked respondents about: the barriers that the business was faced when it was being established and in the early stages of its growth, and what support may help in overcoming those barriers.

Female-founded businesses were more likely than male-founded businesses to report almost all the barriers we asked about as moderate or significant (only two out of 20 barriers were more likely to be reported by male-founded businesses).

Figure 4 Top significant and moderate barriers for female-founded businesses



Source: *Survey of 608 European businesses*
Note: *Analysis excludes don't knows or not applicable responses.*

As shown in Figure 4, the most important barriers for female-founded businesses across all six countries involved difficulties in access to capital, and regulatory obstacles:

- **Access to capital**: 37% of female founded businesses reported difficulty accessing investors or venture capital as a moderate or significant barrier. 39% of female founded businesses cited limited access to finance or credit as a significant or moderate barrier.

- **Regulatory and institutional barriers**: 40% of female founded businesses reported the lack of accessible government support as a moderate or significant barrier. 37% of female founded businesses also reported complexity of administrative or registration procedures, and limited time or capacity to apply for funding as significant or moderate barriers.

Issues in accessing customers, lack of digital readiness and cultural and social barriers were considered a moderate or significant barrier by a smaller (but still substantial) proportion of female-founded businesses:

- **Access to customers**: 30% of female founded businesses cited difficulties identifying or reaching potential customers and 29% of female founded businesses cited limited marketing expertise or budget a significant or moderate barrier.

- **Digital readiness**: around 24% of female founded businesses reported that lacking awareness, knowledge or confidence in using digital tools was a moderate or significant barrier. The tools considered in the survey included websites, online stores, digital marketing or social media, digital marketplaces, and business software such as CRM (customer relationship management).
- **Cultural and social barriers**: 26% of female founded businesses reported that challenges in managing business alongside family or care responsibilities was a moderate or significant issues for their business.

These findings are broadly consistent across different industries, countries, and locations within countries.

Cultural and social barriers, and a lack of digital readiness, are more likely to affect female-owned businesses than male-owned businesses

Differences between female and male-founded businesses in the barriers they considered moderate or significant were particularly marked in the following areas:[4]

- Female-founded businesses were 36% more likely than male founders to report **challenges managing business alongside family or care responsibilities** as a significant or moderate barrier.
- Female-founded businesses were 25% more likely to report bias or discrimination related to ethnicity, age, disability or background.
- Female-founded businesses were 25% more likely to report limited **awareness or understanding of how to sell on digital marketplaces** and 24% more likely to report **difficulties in managing a website or online store** as a significant or moderate barrier.

Again, these findings are broadly consistent across different industries, countries, and locations within countries.

This study indicates five priorities for action to realise the value of gender parity in entrepreneurship

Our findings show that closing the gender gap in entrepreneurship is not just a question of fairness – it is a clear economic opportunity. To realise this potential, we propose five priorities for action, aligned with the EU's competitiveness and SME strategies:

1. **Embed gender inclusiveness in competitiveness, start-up and SME strategies as a core driver of productivity and growth across Member States.** This means treating support for female entrepreneurship as central to long-term economic strategy, not as a

[4] While the survey identifies clear patterns in reported barriers and support needs, no statistical significance testing was conducted, so differences between groups should be interpreted as indicative rather than definitive.

standalone agenda. Our modelling suggests that the pay-off to embedding gender inclusiveness would be high. It also suggests that policies to address gender imbalances and policies to support start-ups are complementary.

2. **Improve access to finance for female founders.** Our survey found that access to capital was a consistent barrier for female-founded businesses. Possible actions to make it easier for women to access credit and capital include dedicated funding schemes, clearer signposting of financing options, and efforts to increase gender diversity among funders and investment decision-makers.
3. **Simplify regulatory processes and reduce administrative complexity.** Our study demonstrates that female-founded businesses are more likely than male-founded businesses to cite these factors as barriers to starting and growing a business. Actions could include streamlining registration procedures, reducing paperwork for support programmes, and ensuring tax and legal guidance is easy to find and understand.
4. **Support digital readiness and uptake among female-led businesses.** Digital tools may offer new opportunities to reach customers and reduce early-stage costs, but our survey found that female entrepreneurs were more likely to cite challenges using them. Areas of support could include help setting up online stores, using CRM or payment systems, and improving confidence with digital marketing or sales platforms. Online tools and marketplaces could be especially important for women, offering lower upfront costs and greater flexibility – critical for those balancing business and caregiving responsibilities.
5. **Address social and gender-specific constraints**, including care responsibilities, societal expectations and discrimination that disproportionately affect women entrepreneurs. This report shows that challenges managing a business alongside family or care responsibilities were widespread among female-founded businesses. Business support should be inclusive and flexible by design and aligned with wider efforts to promote work–life balance and reduce structural bias.

1. Introduction

1.1. Context and motivation for this study

Enhancing competitiveness has become a key focus of the European Union's (EU) economic policymaking, seen as essential to raising productivity, fostering innovation and ensuring long-term resilience. The 2024 Draghi Report calls for a step change in the EU's approach, emphasising the need to close the innovation gap, unlock investment and address bottlenecks in skills and productivity (European Commission, 2024a). The 2025 Competitiveness Compass provides a roadmap to deliver on this vision – helping to identify key drivers of competitiveness, track progress and guide action across Member States (European Commission, 2024b).

Creating the conditions for inclusive and dynamic business formation is a recognised priority for the EU's competitiveness agenda. Key recent strategies, including the EU's SME Strategy (European Commission, 2020), Start-up and Scale-up Strategy (European Commission, 2025a), and Single Market Strategy (European Commission, 2025b), have emphasised the need to dismantle persistent barriers to entrepreneurship, such as those relating to financing and regulatory burdens.

This study focusses on the issue of gender imbalances in entrepreneurship and the role that addressing this issue could have in fostering European economic growth.

Indeed, female entrepreneurship represents a major source of economic potential. Women remain underrepresented among entrepreneurs in Europe. In 2023, 6.1% of working-age women in Europe owned an established business, compared to 8.7% of men – a women-to-men ratio of 0.70. For new businesses, the start-up rate was 6.7% for women and 9.1% for men, giving a slightly higher ratio of 0.73 (GEM, 2024).[5] While these gender gaps have narrowed in recent years, progress has been slow and limited.[6]

While this report focuses on gender disparities in entrepreneurship, we acknowledge that other factors, such as ethnicity, socio-economic background, age or disability, may also shape entrepreneurial outcomes. These are important areas for further research but lie outside the scope of this study.

1.2. Objectives and methods

This study explores the economic potential of reducing gender gaps in entrepreneurship and the most effective ways to support women-led businesses across Europe. Its aims are to:

5 Women also account for only a third of self-employed workers in Europe (see Eurostat, 2023).

6 For example, data from the Global Entrepreneurship Monitor (GEM) shows that between 2002–2005 and 2018–2021, the ratio of female to male established business owners in Europe grew from 0.50 to 0.54.

- Quantify the potential economic gains associated with achieving gender parity in entrepreneurship, defined as 50% of *new* businesses in the economy (i.e. start-ups) being majority female-owned;
- Identify the most important challenges faced by female entrepreneurs; and
- Assess which types of support are considered to be most helpful by female-owned businesses.

To meet these aims, the study draws on two main sources of evidence:

- A quantitative model using secondary data and published evidence.
- A survey of 600 European businesses, designed to provide detailed insights into the barriers faced by entrepreneurs, the types of support they value most, and how these vary by gender, sector, geography and other business characteristics.

Taken together, these approaches allow us to present a compelling economic case for closing the entrepreneurship gender gap, and to identify potential areas for policymakers to focus on to help achieve this goal.

1.3. Report structure

The remainder of the report is structured as follows:

- Section 2 presents the results of our economic modelling, quantifying the potential gains from achieving gender parity in entrepreneurship.
- Section 3 draws on survey data to explore the barriers that female entrepreneurs face and the types of support they find most helpful.
- Section 4 concludes, drawing on both the survey and modelling to highlight priority areas for action.

Further details on our methodology and results can be founded in the Annexes.

2. The economic impact of gender parity in entrepreneurship

2.1. Logic model and evidence

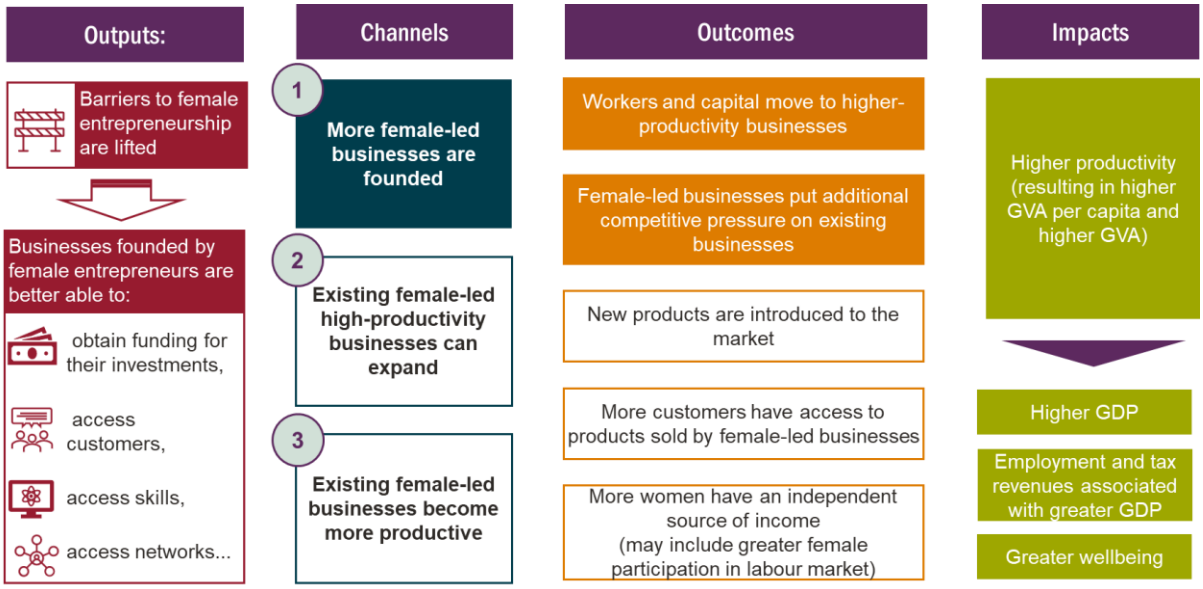
Our analysis models the impact of achieving gender parity in entrepreneurship, defined as 50% of new businesses in the economy (start-ups) being majority-female owned.

Existing global and European research identifies several barriers that disproportionately affect female entrepreneurs and prevent gender parity in entrepreneurship. First, access to finance remains a persistent constraint: women face higher rejection rates, smaller loans and limited access to venture capital, often due to investor bias and underrepresentation in financial networks (Huang et al., 2025; Brush & Greene, 2020; BCG, 2023 – the latter drawing on five major European markets). Second, gaps in human capital and networks – including differences in entrepreneurial experience, financial literacy and access to mentors – limit business development and funding opportunities (Huang et al., 2025). Third, regulatory complexity, tax uncertainty and gender-blind policy design can add friction, particularly for female-owned businesses in non-traditional sectors (Foss et al., 2019 – a European policy review; Huang et al., 2025). Finally, social norms, discrimination and care responsibilities place additional burdens on women, influencing both entrepreneurial intentions and outcomes, as shown in both UK-specific (Roper & Scott, 2009) and global (GEM, 2024) analyses.

Our modelling is underpinned by the theory of change (To) set out below. The ToC identifies three channels through which reducing barriers to female entrepreneurship can improve economic outcomes (see Figure 5Figure 5):

1. **Increase in number of female-led businesses**. More female-led businesses are founded, leading to:
   a. More competitive markets and greater choice for consumers;
   b. Greater female participation in the labour market.
2. **Growth in highly productive female-led businesses**. Existing female-led high-productivity businesses expand, create more value, and highly productive jobs;
3. **Higher productivity in existing female-led businesses**. Existing female-led businesses become more productive, also creating more value and higher-productivity jobs.

Figure 5 Theory of change



Source: Frontier Economics

This study focuses on estimating the economic impacts arising via the first channel, where more female-led firms are founded. An increase in female-led business formation may shift the composition of firms in the economy, reallocating capital and labour towards more productive ventures. The entry of more productive female-led firms is likely to add competitive pressure to the market, leading to higher GVA and wages (GVA per capita).

Existing literature provides evidence for this mechanism. Several studies suggest that firms led by female entrepreneurs are, on average, more productive than comparable male-led firms. This is not because of inherent differences between males and females, but because the systemic barriers described above (in access to capital, networks, mentors…) result in only the most productive female-led firms surviving. This "selection effect" implies that relaxing these barriers would allow a broader pool of productive female-led firms to enter the market, increasing aggregate productivity. Morazzoni & Sy (2022) quantify this effect for the US. The study uses panel data from the Kauffman Firm Survey to estimate that female-led firms exhibit a 10% higher average productivity than comparable male-led firms. This means that female-led companies are able to deliver the same revenues but incurring only 90% of the costs, compared to male-led firms. Abouzahr et al. (2018) provide complementary evidence that women-led start-ups tend to generate more revenue per euro invested than male-led ones, despite receiving less funding. Teignier & Cuberes (2016) estimate that gender gaps in entrepreneurship account for an average income loss of 6% across OECD countries, underlining the macroeconomic significance of tackling these disparities.

Economic benefits are likely to arise as well through the other channels. As such, our estimates are likely conservative, since they do not capture the additional gains that might arise from growth or productivity improvements among existing female-led businesses. For

example, Chiplunkar & Goldberg (2023)[7], find substantial labour force participation gains from reducing female entrepreneurship barriers in India. However, these results reflect a context with low baseline participation and large informal sectors, limiting their relevance for Europe.

2.2. Overview of the modelling approach

To estimate the economic benefits of reducing barriers to female entrepreneurship, we developed a model covering 13 European countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Poland, Spain, Sweden and the UK.

We model the effect of achieving gender parity in entrepreneurship (defined as 50% of all *new* businesses being majority female-owned) on productivity (measured as Total Factor Productivity, TFP) and on economic output (measured as Gross Value Added, GVA).

Our modelling draws on the evidence summarised in Section 2.1, in particular, the finding that female-led firms tend be more productive on average than male-led firms due to "selection effects" created by existing barriers. These barriers mean that only the most productive female-led businesses tend to survive. Therefore, lifting the barriers is expected to bring in new female-led firms that are still highly productive, raising overall economic performance.

Rather than assume that gender parity happens overnight, our model traces the impact of gradual change over time. As more female-led firms enter the market each year, they replace a share of the least productive male-led firms, raising the average productivity of the business population. This reallocation leads to higher national productivity and higher GVA.

2.2.1 How our model works

Our model reflects the dynamic process through which more female-owned businesses would come into the market. This involves the following key modelling choices and assumptions. Further details on our approach are provided in Annex B.

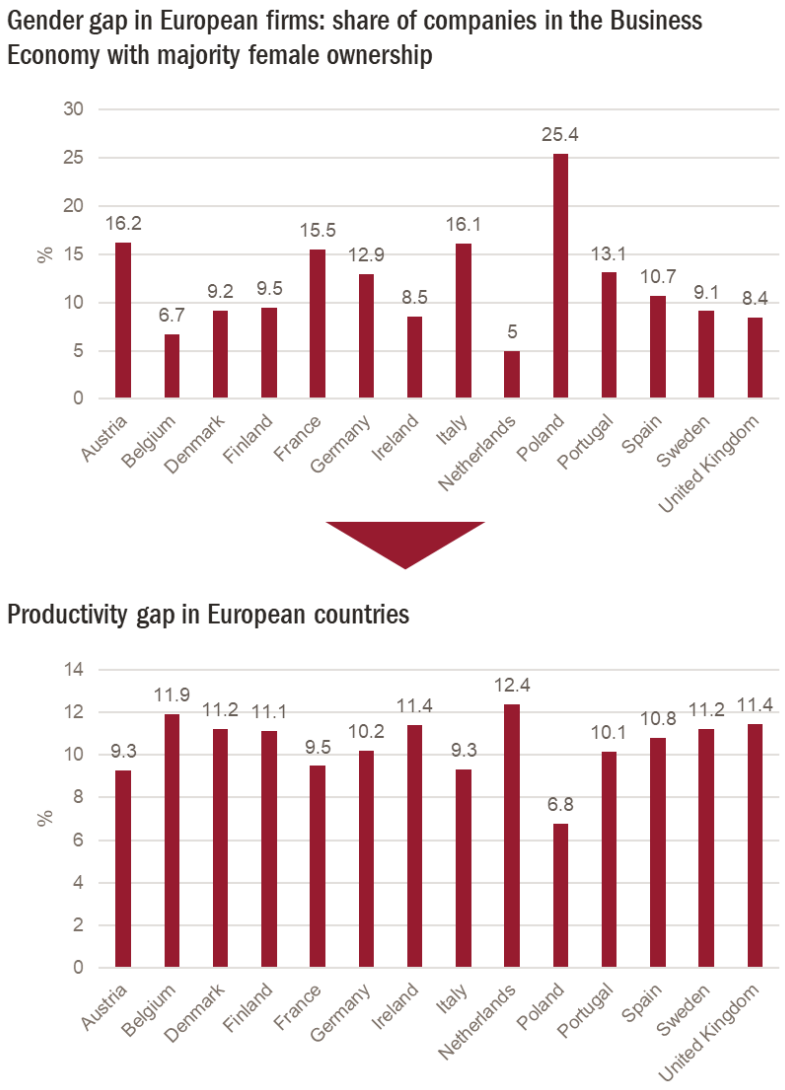
New female-owned businesses that enter the market once barriers to female entrepreneurs are lifted are, on average, more productive than male-owned ones

This is based on the evidence presented in Section 2.1. Ideally, we would use evidence specific to each country in our model on the productivity gap between female and male-owned businesses. However, this evidence is not available. Therefore, we start from the estimate in Morazzoni & Sy (2022) that female-led firms are, on average, 10% more productive than male-led firms. The barriers faced by female entrepreneurs are qualitatively similar in the US as in Europe, Then, we adjust this figure for each European country in our model to reflect differences between Europe and the US, and between countries in Europe, as shown in the figure below. This productivity gap emerges from the presence of barriers to female

[7] https://www.econometricsociety.org/publications/econometrica/2024/11/01/Aggregate-Implications-of-Barriers-to-Female-Entrepreneurship

entrepreneurship. Therefore, we would expect the productivity gap to be higher where these barriers are higher, as reflected in a lower proportion of majority female-owned businesses in the country. Assuming a linear relationship between the productivity gap and the gender gap in business ownership, we obtain the estimated productivity gaps shown below.

Figure 6 Share of majority female-owned businesses in selected European countries



Source: *World Bank Enterprise Survey Data, calculations by Frontier Economics*
Note:

The resulting productivity differentials range between 6.8% and 12.4%, compared to the 10% Morazzoni & Sy estimate for the US. This is consistent with evidence that the barriers facing female entrepreneurs are qualitatively similar across high-income contexts, including both the US and Europe. For example, GEM (2024) shows that women in both regions report lower levels of entrepreneurial self-confidence, higher fear of failure and weaker access to networks and finance than men. Similarly, Foss et al. (2019) and Huang et al. (2025) find that women

in both Europe and the US face structural barriers in finance, education, policy support, and market access, reinforcing common patterns across contexts. This suggests that the dynamics behind the selection effect identified by Morazzoni & Sy (2022) are likely to apply in the European context as well.

Policies to lift barriers to female entrepreneurship are successful

Our modelling assumes that barriers to entrepreneurship are lifted in 2025 (i.e. year 1), and as an immediate result, the share of new firms majority-owned by female entrepreneurs increases to 50%. This is a simplifying assumption made so that our model can show the potential economic value generated by gender parity in entrepreneurship. Clearly, in practice, any actions to increase the share of new firms majority-owned by female entrepreneurs would take some time to take effect.

The impacts of gender parity are realised over time

In our model, the average productivity in each country increases as more productive female-led firms enter and less productive firms exit. In countries that already have a higher share of female-led firms, the potential productivity gains from rebalancing are smaller; in countries with a lower starting share, the potential gains are larger.

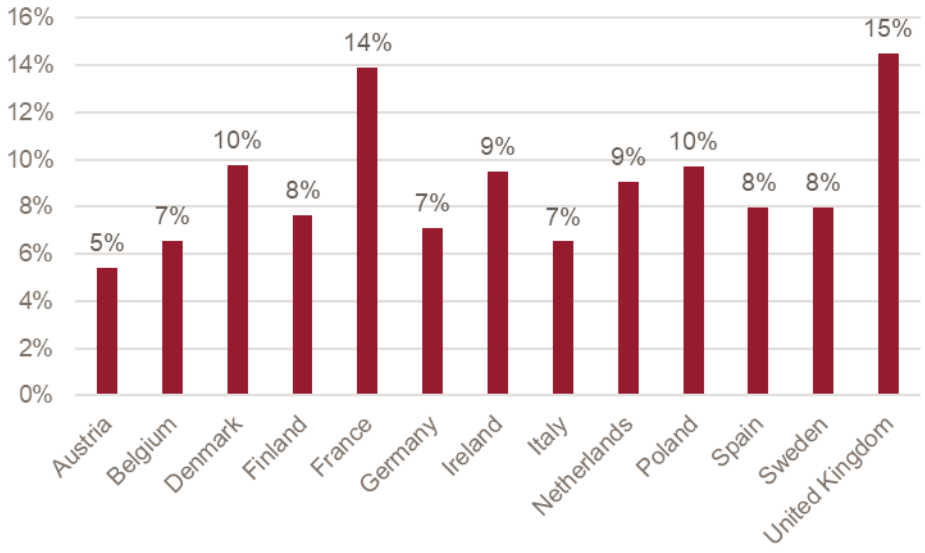
Productivity differences between male and female entrepreneurs decrease over time

As the gender balance in firm ownership evens out over time, the productivity difference between female and male-led firms narrows, reflecting that the productivity differential was driven only by the fact that barriers disproportionately affected female entrepreneurs.

Our main results assume that the overall extent of market dynamism in a country is unchanged over time

We hold the overall market dynamism of each country, that is, the share of new firms entering the economy in a given year (including both female- and male-owned), fixed over time. We assume this is fixed at its latest value, shown in the figure below.

Figure 7 Market dynamism (company births / all companies)



Source: Eurostat, UK Office for National Statistics

In other words, while the barriers that hold back female entrepreneurs are addressed, this does not lead to an increase in the total rate of new business creation. This leads to variation in the estimated value of addressing female entrepreneurship barriers between countries. In countries with higher market dynamism, the reallocation of resources to new, more productive, female-owned firms is faster, and therefore the impact of addressing female entrepreneurship barriers in a given year is higher.

2.3. Key findings

This section presents the key results of our modelling. For each country, we estimate the impact of achieving gender parity in entrepreneurship (defined as 50% of all *new* businesses being female-owned).

Our modelling suggests that achieving gender parity in entrepreneurship would have a significant impact on productivity and GVA by 2040. In particular, we estimate the impact of achieving gender parity on:

- Country-level productivity (defined as Total Factor Productivity) by 2040.
- Country-level annual GVA by 2040.
- The cumulative increase in NPV GVA between 2025 and 2040.

We choose 2040 because a 15-year horizon provides sufficient time for new female-owned firms to enter the economies we modelled and have an impact on aggregate productivity.

As set out in section 2.2, the impact of achieving gender parity on entrepreneurship is higher for countries that start farther from this target and that have greater market dynamism.

Therefore, policies to improve market dynamism would be complementary to policies that address female-specific barriers to entrepreneurship. To explore this mechanism, we estimate an optimistic scenario where both barriers to female entrepreneurship are lifted and successful policies to foster market dynamisms lead to a degree of market dynamism of 15% in all countries.

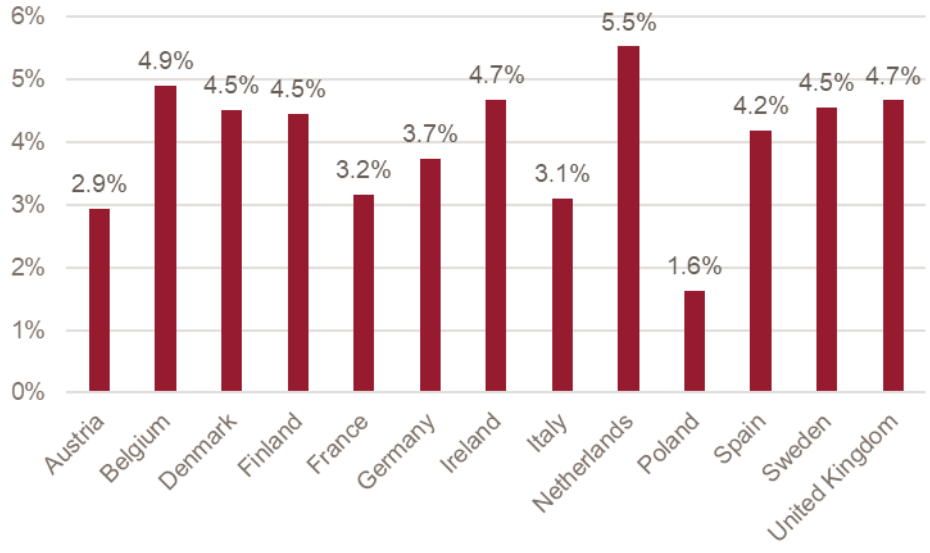
Our estimates are not intended to be precise forecasts, but rather to assess the potential scale of the economic benefits from greater gender equality in entrepreneurship.

2.3.1 The impact of gender parity in entrepreneurship on productivity and GVA

Impact on productivity by 2040

If barriers were lifted now in all 13 countries so that gender parity in entrepreneurship was achieved, by 2040 the productivity of each country would be between 1.6% higher (in Poland) and 5.5% higher (in the Netherlands) than productivity today. This would be equivalent to an annual productivity increase of 0.11% to 0.36% over a 15-year period. To put this into context, average annual productivity growth in the last 15 years of available data for the 13 countries in this study has ranged between -0.83% (in Italy) and 0.96% (in Poland).[8]

Figure 8 Total increase in productivity by 2040 (as % of current productivity levels)



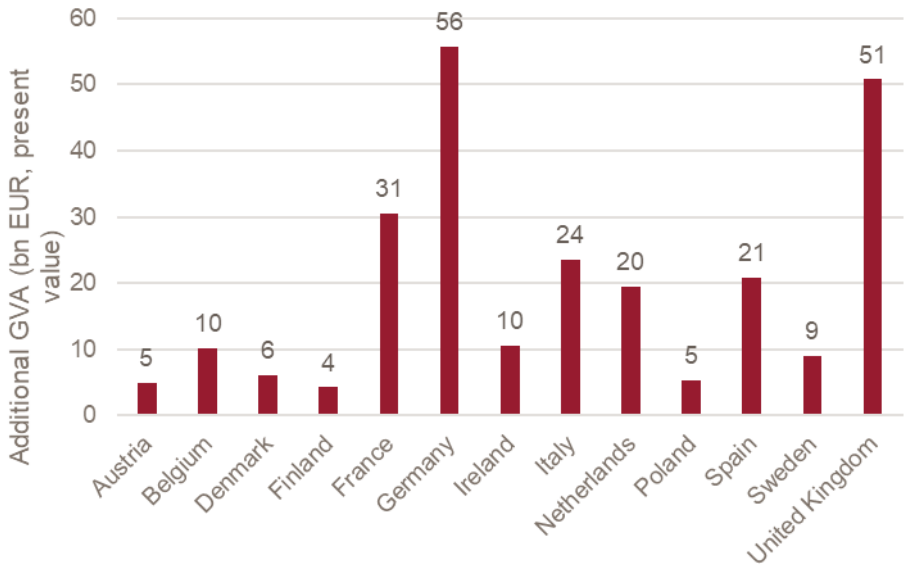
Source: Frontier Economics

[8] Source: Frontier Economics calculations based on Penn World Tables for Total Factor Productivity in international US dollars between 2004 and 2019, accessed through Our World in Data: https://ourworldindata.org/grapher/tfp-at-constant-national-prices-20111?country=ESP~GBR~FRA~POL~DNK~ITA~DEU~BEL~AUT~FIN~IRL~NLD~SWE

Impact on GVA by 2040

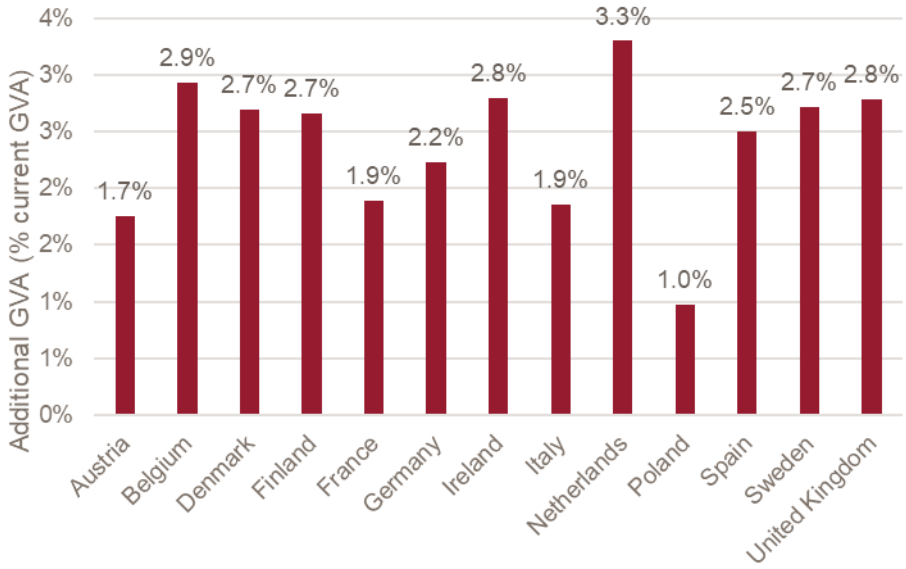
The productivity gains showed above would translate into an impact on economic output, measured in our model as GVA. For the purposes of understanding the broad magnitude of effects, the GVA figures presented here can be considered as equivalent to GDP. We estimate that if gender parity in entrepreneurship was achieved now in all 13 countries in our model, this would lead to an increase their total GVA of around **€250bn (in net present value)**. The results for each country are shown in Figure 9 below, first in euro terms, and then relative to each country's current annual GVA. To put this into context, **€250bn** represents approximately 2% of these countries' current annual GVA. This is larger than the EU's annual budget (which ranges around €160bn-€180bn), and while not directly comparable, amounts to about one-third of the €800bn EU investment gap identified by the Draghi report.

Figure 9 Present value of annual increase in GVA with gender parity, by 2040



Source: Frontier Economics

Figure 10 Present value of annual increase in GVA with gender parity as share (%) of current GVA, by 2040



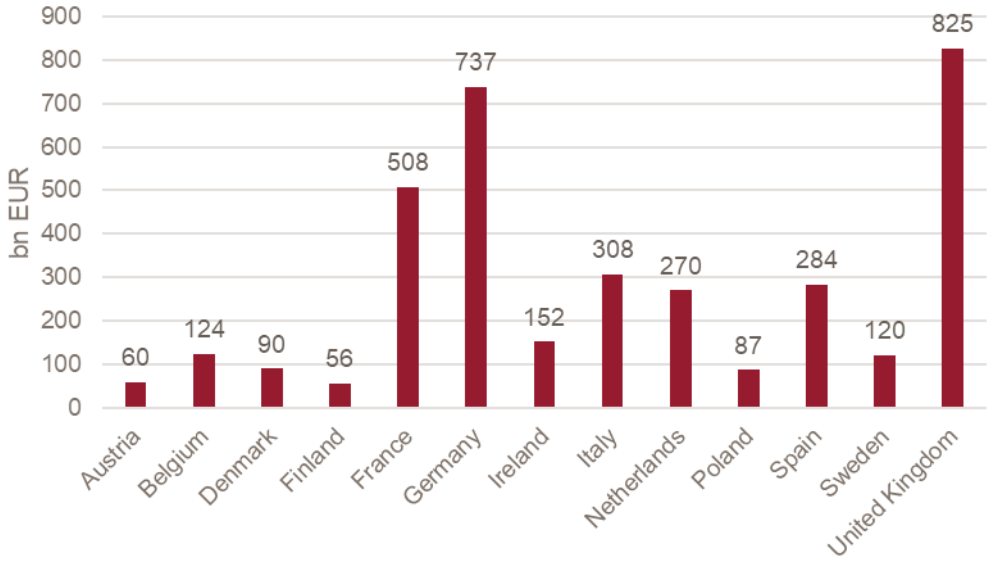
Source: Frontier Economics

The impact of achieving gender parity on GVA would not be limited to the year 2040. On the contrary, this impact would start materialising in 2025 and grow over time as more female-owned businesses enter the economy. Over the 2025-20340 period, the net present value of the cumulative GVA gains would range between €56bn in Finland and €825bn in the UK (see Figure 11). This represents between 16% (Poland) and 46% (Netherlands) of each country's current GVA (see Figure 12).

Cumulative GVA gains are expressed in terms of their net present value (NPV) to provide a time-adjusted measure of value.[9] This incorporates the idea that future benefits are worth less because people prefer benefits sooner rather than later and there is uncertainty about the future. Providing values in NPV terms also allows us to compare the benefits associated with policy changes with varying timelines.

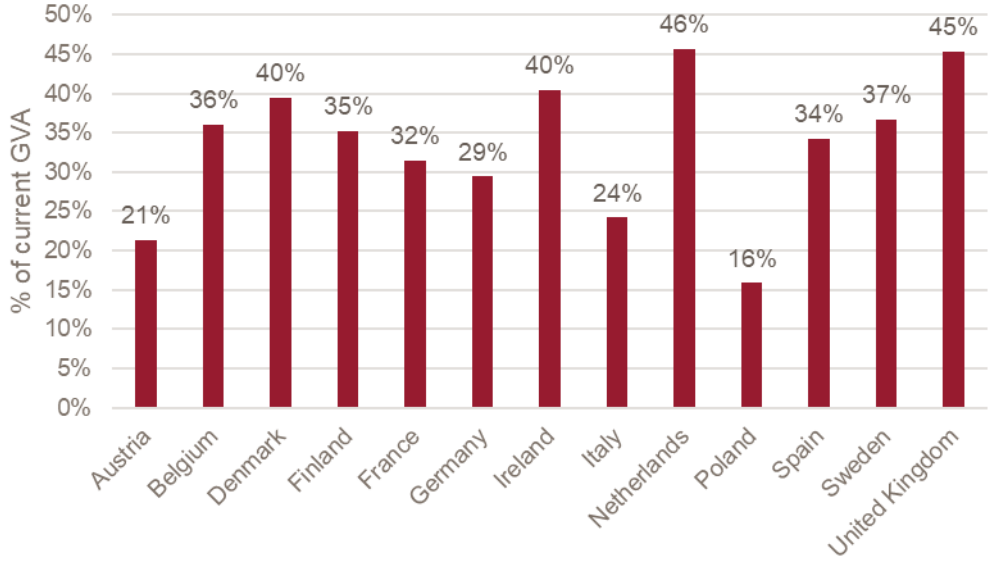
[9] We assume a discount rate of 3.5% in line with best practice in economic appraisal, as reflected in the UK government's Green Book guidance: Gov.Uk. Green Book, 2022. Section 5.4 Discounting and Social Time Preference.

Figure 11 Cumulative additional GVA from gender parity in the flow of new businesses, 2025-2040



Source: Frontier Economics

Figure 12 Cumulative additional GVA from gender parity in the flow of new businesses as share (%) of current GVA, 2025-2040

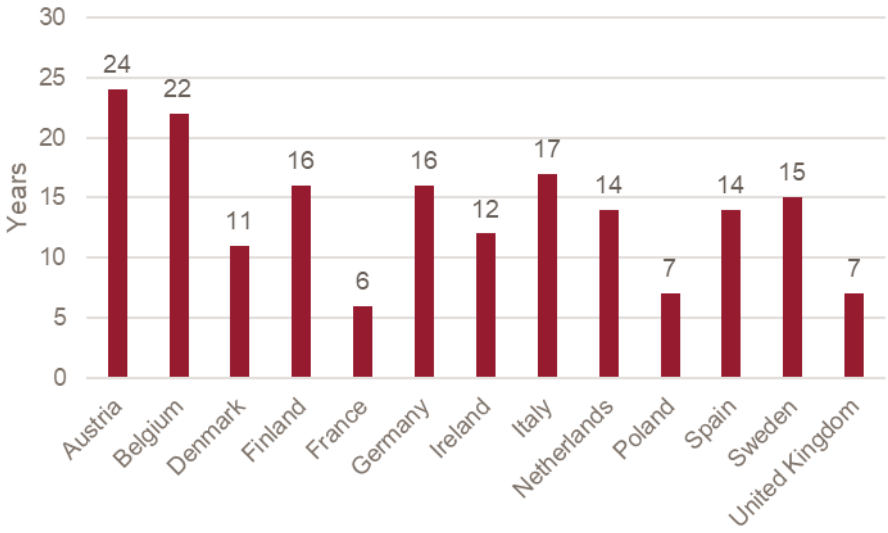


Source: Frontier Economics

Variation in results across countries is driven primarily by two factors:

- **The initial gender gap in business ownership**. This determines the maximum productivity improvement expected. For example, Poland's relatively small effect is driven mainly by its starting point: among the counties analysed, Poland already has the highest share of female-led firms (25% vs 16% in France or 7% in Belgium)[10] (see Figure 21); and
- **The pace at which new firms enter and replace existing ones**. This determines the speed at which productivity improvements are realised. The time needed varies with the degree of market dynamism (how frequently new businesses are created relative to the total number of existing firms). For example, Austria has relatively low market dynamism: the number of new companies entering the market each year is only 5% of the total number of businesses, which slows progress. In contrast, in the UK, new businesses represent 15% of the total each year, meaning that balance in the number of existing companies could be reached in only 7 years (see Figure 13). So, initiatives to support female entrepreneurs and to promote start-up rates would go hand in hand in helping achieve gender parity and promote economic growth.

Figure 13 Number of years to close the gender gap in the number of existing businesses after barriers to female entrepreneurship are lifted



Source: Frontier Economics

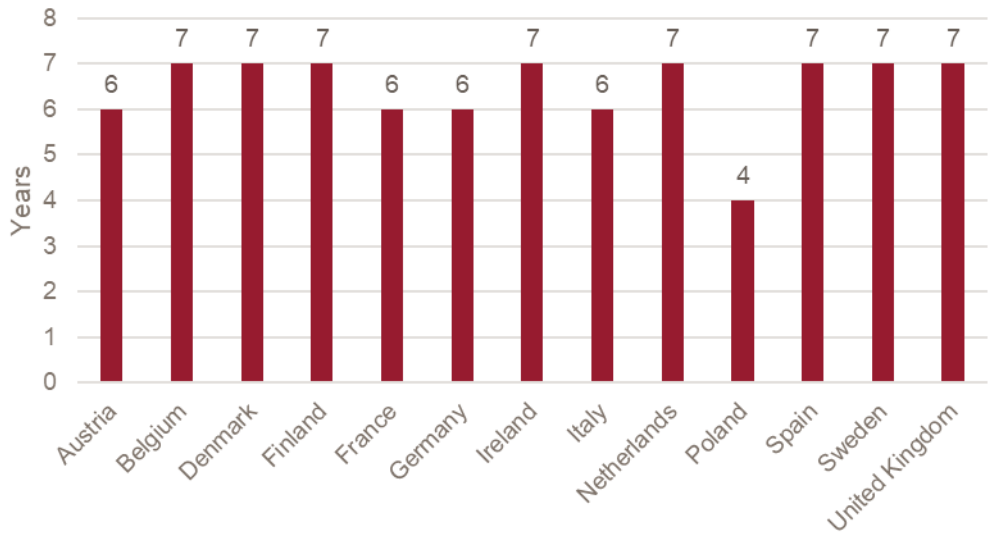
[10] Based on data on the percentage of firms with majority women ownership from the World Bank: The World Bank Enterprise Surveys.

2.3.2 Potential impact of measures to increase market dynamism

Actions to increase market dynamism would be complementary to the addressing of barriers to female-owned businesses. The estimates shown so far assume that market dynamism in each country remains the same when barriers to female entrepreneurship are lifted. We now assess how much bigger the impact of gender parity in entrepreneurship would be under higher market dynamism with a simplified scenario.

We model an optimistic scenario where the degree of market dynamism increases to highest current level observed across all countries in our model (15%, the current level in the United Kingdom). Under this scenario, productivity improvements resulting from gender parity are speeded up and gender balance in the distribution of existing companies is achieved within 4 to 7 years (see Figure 14).

Figure 14 Number of years to close the gender gap in the number of existing businesses under optimistic scenario

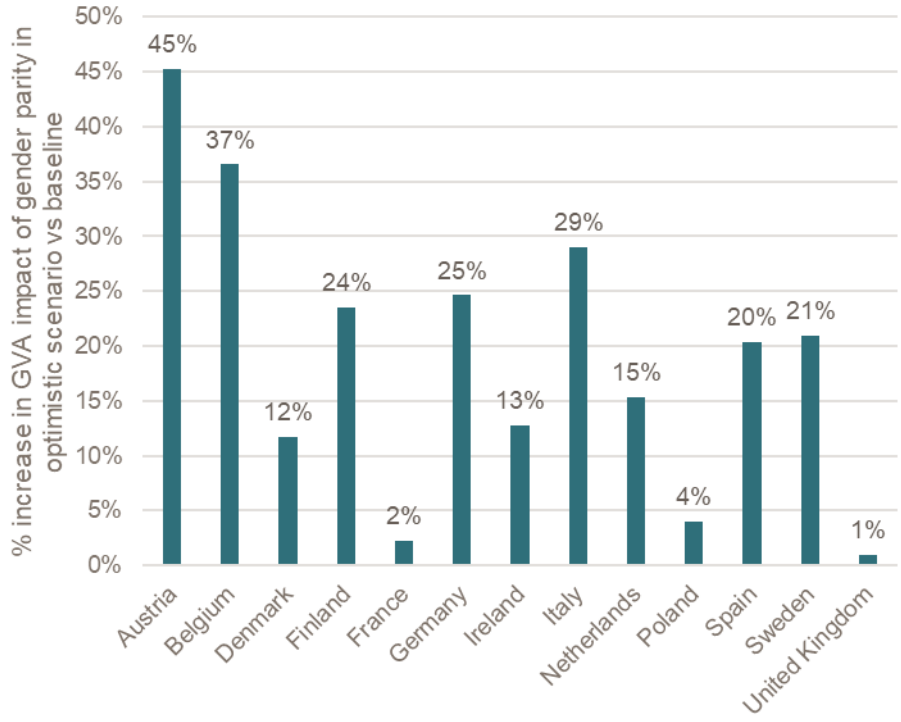


Source: Frontier Economics

Under this optimistic scenario for market dynamism, GVA gains over 2025-2040 would be 1% (United Kingdom) to 45% (Austria) higher (see Figure 15 overleaf) than in the baseline scenario. Across all countries, the total cumulative impact of gender parity on GVA in by 2040 would be €320bn, rather than the €250bn estimated in the baseline scenario.

In some countries, gender balance would already be reached relatively quickly once barriers are removed – due to higher degrees of market dynamism – so accelerating the timeline yields only modest additional gains. In other countries, where progress would otherwise be slower, reaching balance sooner unlocks much larger cumulative benefits.

Figure 15 Cumulative additional GVA from gender parity in the flow of new businesses, 2025-2040 – baseline and optimistic results



Source: Frontier Economics

Note: Labels show the % increase in GVA impact under the optimistic scenario as compared to the baseline scenario.

Our analysis therefore suggests that achieving gender parity in entrepreneurship could generate significant economic value, and that achieving this sooner rather than later would increase that value even further. It is therefore crucial to understand what can be done to achieve these changes. In the next chapter, we focus on businesses' views on the barriers to starting and scaling a business and on their perceptions on what would help most in addressing those barriers.

3. Understanding barriers and support for female entrepreneurship

3.1. Overview of our approach

As discussed in Section 2, achieving gender parity in entrepreneurship in Europe would generate significant economic value. Therefore, this section explores in more detail:

- the key barriers that female entrepreneurs are faced with when starting and growing their business ("early-stage barriers"); and
- what actions business leaders think would most help in addressing these early-stage barriers.

Our analysis draws on a new survey, commissioned as part of this project and carried out by YouGov. The survey has collected responses from 608 business founders/senior leaders across six European countries: Denmark, Finland, France, Germany, Italy and Poland. Around half of the responses were collected from female-founded businesses, and the remaining half from male-founded businesses. Further information on the survey and on the respondents is provided in Annex B .

3.2. The barriers to female entrepreneurship

The survey aims to identify the early-stage barriers (in both starting, running and growing a business) identified by female and male-founded businesses in five key areas: (i) markets and customers, (ii) regulatory and institutional, (iii) social and gender specific, (iv) digital readiness, and (v) access to capital.

These categories were selected based on a review of the academic and policy literature, which highlights persistent challenges such as accessing finance, navigating regulation, managing care responsibilities, and experiences of bias or exclusion (Foss et al., 2019; GEM, 2024; Huang et al., 2025; Rose, 2019; ILO, 2025).

In addition to these well-documented obstacles, we included a set of questions focused on digital tools. Economic theory suggests that digitalisation has the potential to lower barriers to entry, for example by reducing fixed costs, enabling broader market access and streamlining business operations. These themes also appear in EU policy frameworks such as the SME Strategy for a Sustainable and Digital Europe (European Commission, 2020), which highlights the role of digitalisation in strengthening SME competitiveness and supporting uptake of new technologies.

While digital tools and marketplaces are cited in theory and policy as potential enablers of entrepreneurship, the survey explored whether these benefits are being realised in practice, and whether any groups face barriers to accessing them. Specifically, we included survey

questions on digital readiness to understand whether barriers such as gaps in digital skills, confidence using business software, or understanding of online tools might prevent some groups (including women) from fully benefiting from digital tools. This approach allows us to assess whether digitalisation acts as a leveller, or whether targeted support may be needed to ensure that all entrepreneurs can access its potential benefits.

In the survey, respondents were able to identify if they found each barrier to be a: (i) significant barrier, (ii) moderate barrier, (iii) minor barrier, (iv) minimal barrier, (v) not a barrier at all. For the analysis considered below, “not applicable” or “don’t know” responses are excluded.

First, we identify the most important early-stage barriers for female-founded businesses. Second, we identify where the differences in perceived barriers between female and male-founded businesses are the largest. Third, we conduct the same analysis but at the country specific level.

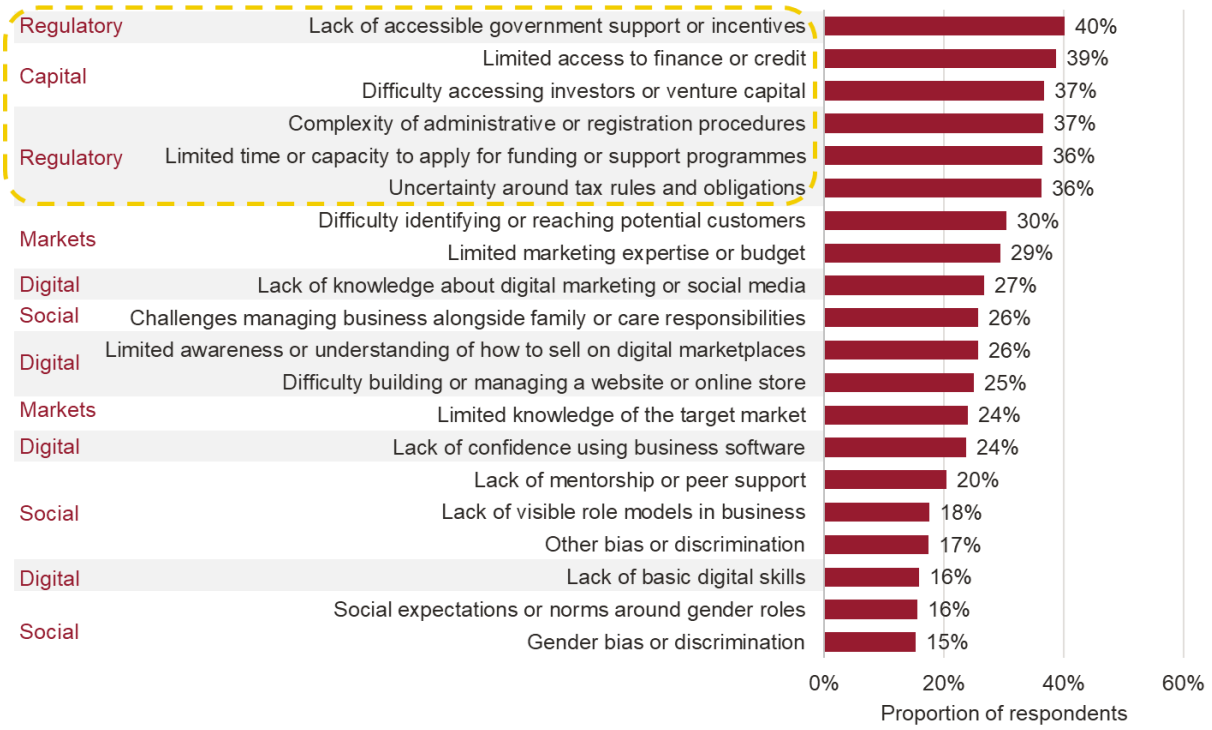
3.2.1 What are the most important early-stage barriers?

Top barriers identified for female-founded businesses

Our survey analysis found that the majority of factors we asked about were considered at least a “minimal” barrier[11] or barrier overall by female-founded businesses. As such, we focus our analysis on the barriers which were considered significant or moderate.

[11] i.e. considered a minimal, moderate, minor or minimal barrier.

Figure 16 Top significant and moderate barriers for female-founded businesses



Source: *Survey*
Note: *Analysis excludes don't knows or not applicable responses.*

As shown in Figure 16, the most important barriers for female-founded businesses across all six countries involved difficulties in access to capital and regulatory issues:

- **Regulatory and institutional barriers**: 40% of female-founded businesses reported the lack of accessible government support as a moderate or significant barrier. 37% of female-founded businesses also reported complexity of administrative or registration procedures, and limited time or capacity to apply for funding as significant or moderate barriers. These findings are consistent with the "Entrepreneurship for All" study in Sweden (Implement Consulting Group, 2024), which highlights that regulatory complexity and insufficient visibility of support measures are key concerns for women entrepreneurs. The study recommends "simplifying regulatory procedures, increasing transparency and access to relevant support measures" to address these issues.

- **Access to capital**: 37% of female-founded businesses reported difficulty accessing investors or venture capital as a moderate or significant barrier. 39% cited limited access to finance or credit a significant or moderate barrier.

Cultural and social barriers, issues in accessing customers, and lack of digital readiness were considered a moderate or significant barrier by a smaller proportion of female-founded businesses:

- **Cultural and social barriers**: 26% female-founded businesses reported that challenges in managing business alongside family or care responsibilities was a moderate or significant issues for their business.
- **Access to customers**: 30% cited difficulties identifying or reaching potential customers, and 29% limited marketing expertise or budget.
- **Digital readiness**: around 25% of female-founded businesses reported that lacking awareness, knowledge or confidence in using digital tools was a moderate or significant barrier. The tools considered in the survey included websites, online stores, digital marketing or social media, digital marketplaces, and business software such as CRM (customer relationship management).

These results were broadly consistent between different groups of female-owned businesses, in terms for example of industry and location within each country.

These results are closely aligned with the wider literature. For example, the 2024 GEM Women's Entrepreneurship Report highlights access to capital as one of the most persistent challenges for women entrepreneurs globally – a pattern echoed in our survey, where over a third of female-founded businesses cited difficulties securing credit or venture capital. Similarly, the GEM report and Cong et al. (2024) note that women in high-income countries continue to face disproportionately high regulatory hurdles and information gaps when navigating administrative procedures, which is consistent with the 40% of female founders in our sample reporting difficulties accessing government support. Finally, our finding that digital readiness remains a barrier for around one in four female-led firms also reflects concerns raised in Huang et al. (2025), who document persistent gaps in the uptake of key digital tools among women entrepreneurs, particularly for e-commerce and online customer engagement.

Differences between female and male-founded businesses

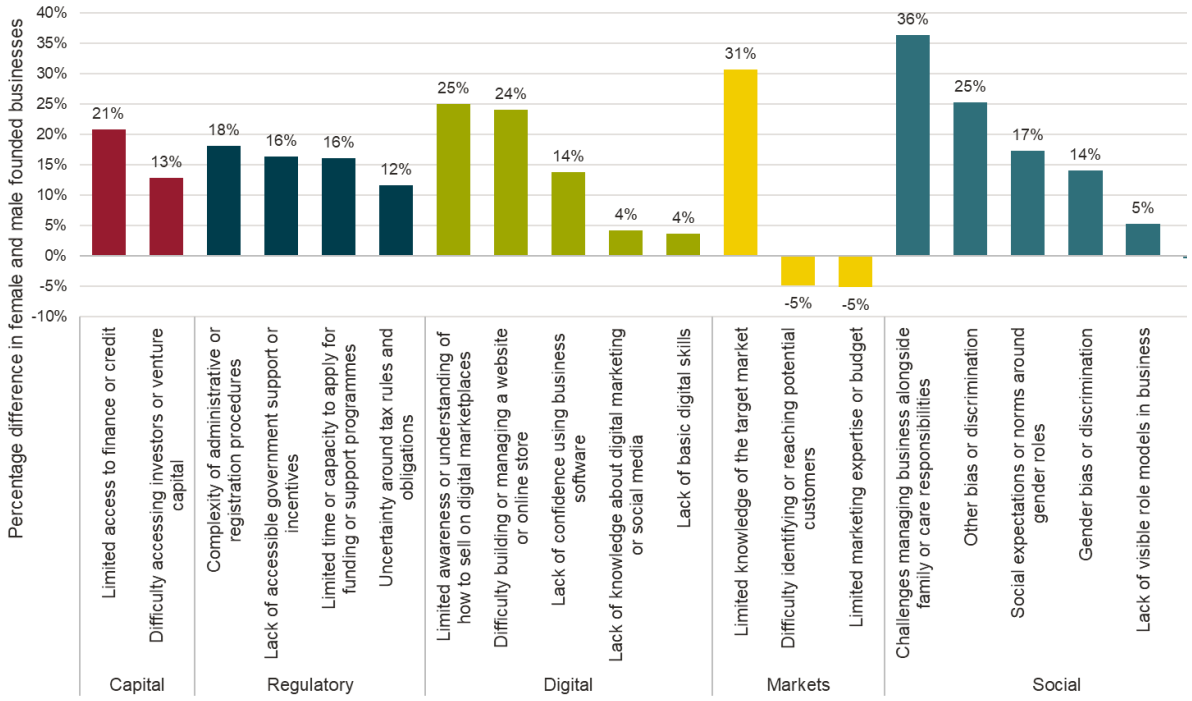
In general, the most important barriers for male-founded businesses were similar to the most important barriers for female-founded businesses, with the highest emphasis placed on regulatory and capital constraints. However, female-founded businesses were more likely than male-founded businesses to report that barriers had a moderate or significant impact on their company, for nearly all the barriers we asked about (18 out of 20). The differences between female and male-founded businesses in their perception of potential barriers by category are summarised in Figure 17. The largest differences within each category are summarised as follows:

- **Capital:** Female-founded businesses were 21% more likely to report limited access to finance or credit as a significant or moderate barrier.
- **Regulatory and institutional:** Female-founded businesses were 18% more likely to report complexity of administrative or registration procedures as a barrier.
- **Digital:** Female-founded businesses were 25% more likely to report limited awareness or understanding of how to sell on digital marketplaces (e.g. Amazon, Etsy, eBay). They

were also 24% more likely to report difficulty in building or managing a website or online store.

- **Markets and customers:** Female-founded businesses were 31% more likely to report limited knowledge of the target market as a barrier.
- **Social and gender-specific:** Female-founded businesses were 36% more likely to report challenges managing a business alongside family or care responsibilities.

Figure 17 Difference between the proportion of female and male-founded businesses reporting a factor as a moderate or significant barrier by category



Source: Survey
Note: Analysis excludes don't knows or not applicable responses.

Again, these results were broadly consistent between different groups of businesses, in terms for example of industry and location within each country.

Differences between countries

Our finding that access to capital and regulatory and institutional barriers are the most important barriers for female-owned businesses is consistent across all countries in our sample. Indeed, the top five significant/moderate barriers identified by female-founded businesses typically sit in the access to capital and regulatory and institutional categories for all countries in the sample. However, female-owned businesses in Germany and Finland were generally less likely to report barriers as moderate or significant compared to other countries,

across all barrier types. Moreover, for female-owned businesses in Germany, regulatory and institutional barriers were relatively more important than access to capital barriers; this was the opposite in all other countries.

Table 1 Top significant or moderate barriers faced by female-founded businesses

Category	Barrier	Number of countries identifying barrier as a top 5	Proportion of female-founded businesses reporting barrier as significant or moderate					
			Denmark	Finland	France	Germany	Italy	Poland
Access to capital	Limited access to finance or credit	5	41%	27%	52%	32%	48%	30%
	Difficulty accessing investors or venture capital	4	47%	27%	33%	21%	43%	44%
Regulatory and institutional	Lack of accessible government support or incentives	4	35%	25%	49%	31%	55%	36%
	Complexity of administrative or registration procedures	4	39%	14%	47%	31%	43%	38%
	Uncertainty around tax rules and obligations	3	33%	10%	49%	43%	44%	32%

Source: Survey
Note: Analysis excludes don't knows or not applicable responses.

3.3. Supporting female entrepreneurship

Potential solutions to overcome barriers to entrepreneurship suggested by female-founded businesses

In this section we identify the solutions which were most likely to be considered helpful in tackling early-stage barriers. We find that for most solutions, female-founded businesses were more likely to identify them as helpful compared to male-founded businesses (13 of the 19 solutions).

As identified in Section 3.2 above, the top significant or moderate barriers identified by female-founded businesses all fell within the regulatory and institutional and access to capital categories. Similarly, we find that majority of top suggested solutions also seek to mitigate barriers in the regulatory and institutional and access to capital categories.

As shown in Figure 18, we find that the top solutions identified by female-founded businesses were:

- **Regulatory and Institutional**: 27% reported simplified tax information for new businesses and 16% reported grant funding specifically for new or underrepresented entrepreneurs.
- **Access to capital**: 21% reported easier access to loans, credit or other forms of finance and 16% reported tailored advice/support around securing finance, which was reported by 16% of female-founded businesses.
- **Markets and customers**: 19% reported easier access to information on starting a business, which was reported by 19% of female-founded businesses.
- **Digital readiness**: 18% reported support setting up a professional website or online store as a way of growing.

These solutions were considered to most likely solve concerns around: (i) reducing time or complexity of getting business started, (ii) improve access to startup capital or resources, (iii) improve the ability to reach customers, and (iv) increase confidence to take the first step to start a business. While each solution addresses a different type of barrier, they share a common emphasis on making early-stage entrepreneurship more accessible. For example, support setting up a website or online store may help address specific gaps in capability reported, and access to finance, by some entrepreneurs when it comes to building an online presence.

The top solutions identified by male-founded businesses were similar to female-founded businesses. The main differences were that male-founded businesses were less likely to consider tailored advice/support around securing finance and support setting up a professional website or online store as important. Instead, they were more likely to identify help navigating or applying for government support as potential solutions.

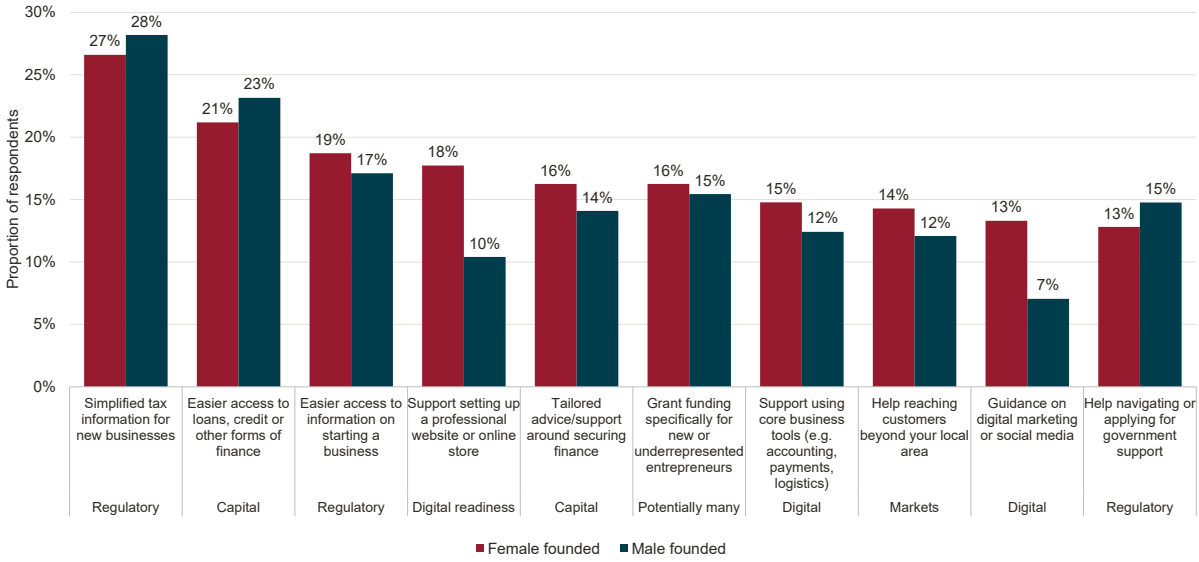
These findings are broadly consistent with evidence from the “Entrepreneurship for All” study in Sweden (Implement Consulting Group, 2024), which recommended simplified tax and regulatory processes, improved access to information, and greater visibility of support programmes as key enablers for female entrepreneurs.

The “Entrepreneurship for All” study also found that female and male entrepreneurs reported similar perceptions of barriers when it came to reaching new customers and markets through digital marketplaces, suggesting these tools may help reduce gender-based disadvantages in early-stage business growth. In addition, although based in different contexts, there are studies indicating that digital tools can help underrepresented entrepreneurs overcome structural barriers to market access. In Latin America, women-led firms using a digital trade platform (ConnectAmericas) increased export values by almost 40 percent, compared to around 10 percent for comparable male-led firms (Poole & Volpe Martincus, 2023). In the UK, platforms such as Deliveroo and UberEats were found to reduce entry barriers and disproportionately benefit minority entrepreneurs (Shamsi, 2025). While context-specific, these findings suggest that digital tools have the potential to reduce some early-stage barriers

but may not be equally accessible to all entrepreneurs without targeted support.. More broadly, research has shown that stronger digital entrepreneurial ecosystems are associated with higher levels of female entrepreneurial activity, suggesting that supporting digital integration could help widen participation (Huang et al., 2025).

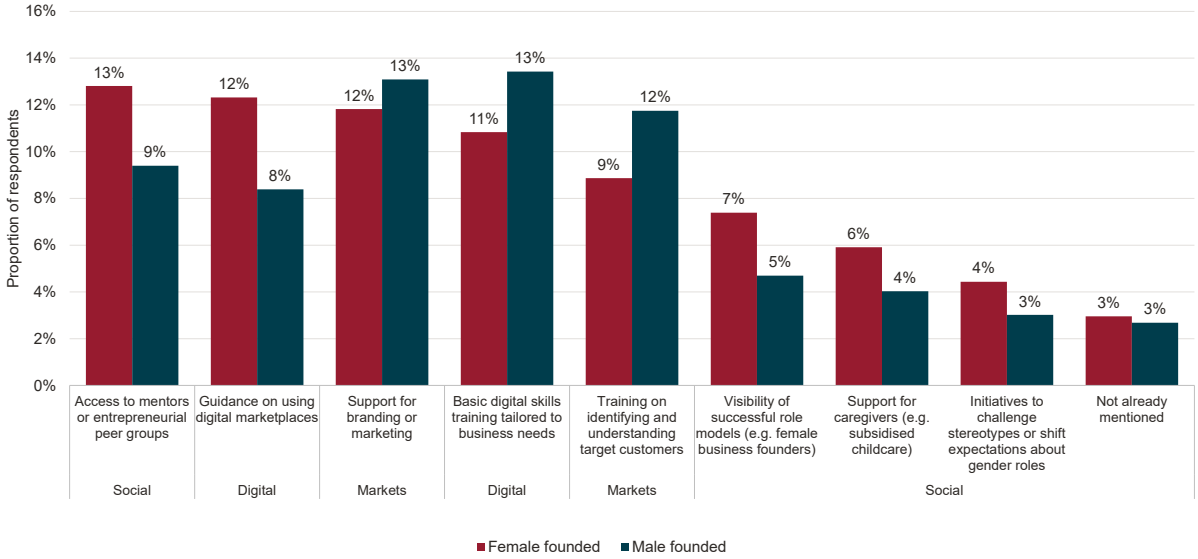
The survey also identified that solutions surrounding social and gender specific barriers were not typically top considered solutions (see Figure 19). Even though 26% of female-founded businesses considered challenges managing business alongside family or care responsibilities a significant or moderate barrier, only 6% of female-founded businesses stated that support for caregivers (e.g. subsidised childcare) would help mitigate early-stage barriers. This may suggest that these challenges are seen as more systemic or embedded in broader social norms, rather than easily addressed through individual policy measures.

Figure 18 Top early-stage barrier solutions identified by female-founded and male-founded businesses



Source: *Survey*
Note: *Analysis excludes don't knows or not applicable responses.*

Figure 19 Additional early barrier solutions identified by female-founded and male-founded businesses



Source: *Survey*
Note: *Analysis excludes don't knows or not applicable responses.*

Top identified early-stage solutions by country

When focussing on the top reported solutions which were identified by female-founded businesses across each of the counties, solutions pertaining to regulatory and institutional barriers stand out as the most helpful.

For example, as shown in Table 2, **simplified tax information for new businesses** was a major solution in all countries. The proportion of respondents selecting this solution ranged between 20% and 33% of female-founded businesses. This was a particularly significant solution in Denmark.

However, we note that solutions regarding access to capital, digital readiness and markets and customers are also important.

When considering country specific barriers and solutions, we typically find alignment between the two. For example: (i) in Denmark top barriers and solutions were around access to capital, (ii) Finland top barriers and proposed solutions were around markets and customers, and (iii) in France, Germany and Italy top barriers and proposed solutions were around regulatory and institution. Poland is the only country where the top barriers were around access to capital, but the proposed solutions were around digital readiness (and access to capital).

Table 2 Top solutions identified by female-founded businessess

Barrier category	Solution	Number of countries identifying solution as a top 5	Proportion of female-founded businesses identifying solution					
			Denmark	Finland	France	Germany	Italy	Poland
Regulatory and institutional	Simplified tax information for new businesses	6	33%	20%	32%	24%	28%	23%
Access to capital	Easier access to loans, credit or other forms of finance	5	19%	20%	32%	21%	20%	14%
Regulatory and institutional	Easier access to information on starting a business	4	22%	20%	32%	9%	18%	11%
Digital readiness	Support setting up a professional website or online store	4	19%	17%	21%	21%	13%	17%
Markets and customers	Help reaching customers beyond your local area	3	19%	20%	11%	9%	20%	9%
Multiple	Grant funding specifically for new or underrepresented entrepreneurs	3	7%	17%	26%	21%	15%	9%

Source: Survey
Note: Analysis excludes don't knows or not applicable responses.

4. Conclusions

This study has demonstrated that closing the gender gap in entrepreneurship is a significant economic opportunity. Reducing barriers to female entrepreneurship would increase the number of productive businesses, raise overall productivity, and deliver substantial gains in GVA across Europe. Our survey findings also highlight persistent obstacles faced by women entrepreneurs and point to clear opportunities for more targeted support.

Delivering on this potential will require sustained policy effort, aligned with the EU's competitiveness, single market and SME strategies. Based on our findings, we propose the following five policy priorities:

1. **Embed gender inclusiveness in competitiveness and SME strategies.** This study has estimated that the potential economic benefits of achieving gender parity in entrepreneurship are large. However, there are barriers that affect disproportionately female entrepreneurs. This suggests that the goal of achieving gender parity in entrepreneurship could be embedded across EU and national productivity, competitiveness and entrepreneurship agendas. Moreover, our analysis suggests that policy actions to support start-up rates would magnify the impact of policies to support female entrepreneurs.

2. **Improve access to finance by addressing structural barriers in the funding landscape.** Our survey found that access to capital as a consistent barrier for female-founded businesses. 37% of female-founded businesses reported difficulty accessing investors or venture capital as a moderate or significant barrier and 39% cited limited access to finance or credit a significant or moderate barrier. Possible actions include dedicated funding schemes, clearer signposting of financing options, and efforts to increase gender diversity among funders and investment decision-makers.

3. **Simplify regulatory processes and reduce administrative complexity.** Our survey shows that female-founded businesses were more likely than men to report regulatory and institutional hurdles before their success. 40% of female-founded businesses reported the lack of accessible government support as a moderate or significant barrier and 37% reported complexity of administrative or registration procedures, and limited time or capacity to apply for funding as significant or moderate barriers. Simplifying registration processes and improving access to government support could remove friction at early stages.

4. **Support digital readiness and uptake among women-led businesses.** Female entrepreneurs were more likely to perceive challenges with digital tools. Around 25% of female-founded businesses reported that lacking awareness, knowledge or confidence in using digital tools was a moderate or significant barrier. While digital tools and marketplaces are often presented as tools to lower entry barriers and reach wider markets, some entrepreneurs may face obstacles to adopting and using them effectively.

Targeted support around digitalisation (for example, help with setting up online stores or using online marketplaces) could help increase the percentage of female entrepreneurs, therefore leading to significant increases in productivity and GVA.

5. **Address social and gender-specific constraints.** Challenges managing a business alongside family or care responsibilities were widespread among female-founded businesses. Female-founded businesses were 36% more likely to report this as a significant or moderate barrier. Additionally, female-founded businesses were 25% more likely to perceive other bias or discrimination as a significant or moderate barrier. Ensuring that business support is flexible, inclusive and aligned with wider care policies could help mitigate these challenges. However, the relatively low demand for targeted support measures, such as subsidised childcare, may suggest that these constraints are seen as more systemic, pointing to the need for broader societal and policy change alongside tailored business support.

Bibliography

Abouzahr, K., Krentz, M., Harthorne, J., & Brooks Taplett, F. (2018). Why women-owned startups are a better bet. Boston Consulting Group. https://www.bcg.com/publications/2018/why-women-owned-startups-are-better-bet

BCG. (2023). Women are under-represented in the European startup ecosystem: SISTAxBCG barometer. Boston Consulting Group.

Brush, C.G. & Greene, P.G. (2020). Catalysing Change in Equity Investing: Disruptive Models for Financing Women's Entrepreneurship. Diana International Impact Report. Babson College, January https://www.babson.edu/media/babson/assets/diana-project/diana-impact-report.pdf

Chiplunkar, G., & Goldberg, P. K. (2024). Aggregate implications of barriers to female entrepreneurship. Econometrica, 92(6), 1801–1835. https://www.econometricsociety.org/publications/econometrica/2024/11/01/Aggregate-Implications-of-Barriers-to-Female-Entrepreneurship

Cong, L. W., Liu, B., Yang, X., & Zhang, X. (2024). Bridging the gender gap in entrepreneurship and empowering women via digital technologies. https://cesi.econ.cuhk.edu.hk/wp-content/uploads/35_Bridging-the-Gender-Gap-in-Entrepreneuship-and-Empowering-Women-via-Digital-Technologies_cpyz.pdf

European Commission. (2020). An SME strategy for a sustainable and digital Europe (COM/2020/103 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0103

European Commission. (2024a). The Draghi report on the future of European competitiveness. https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

European Commission. (2024b). 2025 Competitiveness report – Press release. https://ec.europa.eu/commission/presscorner/detail/en/ip_25_339

European Commission. (2025a). EU start-up and scale-up initiative. https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/jobs-and-economy/eu-startup-and-scaleup-strategy_en

European Commission. (2025b). Single market strategy. https://single-market-economy.ec.europa.eu/single-market/strategy_en

Eurostat. (2023). Women in the EU: More likely to be employees than self-employed. https://ec.europa.eu/eurostat/web/products-eurostat-news/w/edn-20230307-1

Erixon, F., Guinea, O., & du Roy, O. (2024). The EU's productivity performance: Falling behind the curve. EconPol Forum, 3(25). European Centre for International Political Economy. https://ecipe.org/wp-content/uploads/2024/05/econpol-forum-2024-3-eu-us-productivity.pdf

Foss, L., Henry, C., Ahl, H., & Mikalsen, G. H. (2019). Women's entrepreneurship policy research: A 30-year review of the evidence. Small Business Economics, 53, 409–429. https://doi.org/10.1007/s11187-018-9993-8

GEM (Global Entrepreneurship Monitor). (2024). 2023/24 Women's entrepreneurship report: Reshaping economies and communities. https://www.gemconsortium.org/reports/womens-entrepreneurship

Huang, Y., Zhang, J., Xu, Y., & Liu, X. (2025). Digital entrepreneurial ecosystem and female entrepreneurial activity. Humanities and Social Sciences Communications, 12, 162. https://doi.org/10.1057/s41599-024-04345-y

International Labour Organization. (2025). Empowering women entrepreneurs through and within the care economy. ILO Policy Brief. https://www.ilo.org/publications/empowering-women-entrepreneurs-through-and-within-care-economy

Implement Consulting Group. (2024). Entrepreneurship for all – 10 recommendations on how to democratise entrepreneurship in Sweden. https://implementconsultinggroup.com/article/entrepreneurship-for-all

Morazzoni, M., & Sy, A. (2022). Female entrepreneurship, financial frictions and capital misallocation in the US. Journal of Monetary Economics, 129, 93–118. https://doi.org/10.1016/j.jmoneco.2022.03.007

Poole, J., & Volpe Martincus, C. (2023). Can online platforms promote women-led exporting firms? Inter-American Development Bank, IDB Working Paper No. 1507. https://www.econstor.eu/bitstream/10419/299442/1/1890497061.pdf

Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship. HM Treasury, United Kingdom. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784324/RoseReview_Digital_FINAL.PDF

Roper, S., & Scott, J. M. (2009). Perceived financial barriers and the start-up decision: An econometric analysis of gender differences using GEM data. International Small Business Journal, 27(2), 149–171. https://doi.org/10.1177/0266242608100488

Shamsi, J. (2025). A new order? Digital disruption and entrepreneurial opportunities. London School of Economics. https://www.javadshamsi.com/uploads/shamsi_JMP.pdf

Teignier, M., & Cuberes, D. (2016). Aggregate effects of gender gaps in the labour market: A quantitative estimate. Journal of Human Capital, 10(1), 1–32. https://doi.org/10.1086/683847

Annex A – Detailed modelling methodology

A.1 Technical overview of the modelling approach

This section provides a technical overview of the modelling approach, as well as the key assumptions and limitations of our work. Additional technical details and a comprehensive list of assumptions can be found in the next section (*Further details of the modelling approach*).

We have built a model to estimate the economic benefits of increased female entrepreneurship for 13 European countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Poland, Spain, Sweden and the UK.

The model is focused on exploring the economic benefits of lifting the barriers faced by potential female entrepreneurs so that more female-led firms are founded. In particular, the aim is to estimate the increase in productivity, and the associated increase in GVA, from removing the barriers that female entrepreneurs face disproportionately to their male counterparts while founding, expanding and growing their businesses.

In a scenario where all barriers to female entrepreneurship were lifted, we could simplistically assume that the gender distribution of existing firms evens out immediately. This would lead to an increase overall productivity because of an increase in the share of more productive female-led firms. A straightforward calculation of the likely benefits of gender parity in entrepreneurship could consist of:

1. Calculating the difference between the status quo and gender parity in entrepreneurship. For example, if in each country 10% of businesses are currently female-owned, it would need a further 40% of businesses to be female-owned to achieve a 50:50 gender split.
4. Multiplying the figure calculated at step 1 by the productivity differential between female-owned and male-owned businesses (e.g. 10% for the US according to Morazzoni & Sy 2022).
5. The result would be an increase of 4% in the aggregate productivity for the country resulting from achieving gender parity.

However, there are several reasons why a simplified approach would not deliver plausible results:

- First, in reality, the gender distribution of firms would take time to even out. The speed of this change would be determined not only by policies focused at addressing gender parity but also by the degree of market dynamism (how frequently new businesses are created relative to the total number of existing firms).

- Second, a simplistic approach would still raise questions around the market dynamics following the shock, e.g.: “Are successful female-led firms as productive as female-led firms hindered by gender-based barriers?”; “Is the market able to expand to accommodate

all the new female-led firms necessary to reach gender parity?"; and "If the market does not expand, what happens to the existing firms?"

- This approach would risk overstating the benefits of achieving gender parity. A key reason for this is that the existing productivity differential reflects the current situation where only the most productive female-led businesses can enter and stay in the market. However, if more female entrepreneurs were able to start and grow their business, this would no longer be the case. New female-led businesses that are not as high-productivity would also be able to enter the market. Therefore, a more realistic modelling approach is required.

Modelling the long-term impact of removing barriers to female entrepreneurship is a complex task. It requires strong assumptions – for example, about whether male and female-led firms differ in their underlying productivity, and how market dynamics evolve as new firms enter and others exit. In addition, data on productivity and the gender distribution of firms is incomplete or inconsistent in many countries. As a result, we have had to rely on reasonable proxies and simplifying assumptions to translate the available evidence into model inputs.

Key assumptions

1. Key modelling assumption: female-led firms are, on average, more productive than male led firms

The key assumption underpinning the model is that female-led firms are, on average, more productive than male-led firms. This difference is not intrinsic. Rather, it is driven by the fact that female entrepreneurs face gender-related barriers meaning that only the most productive female-led firms are able to establish in the market.

In turn, this means that countries with higher gender parity in the distribution of firms will present a lower productivity gap.

We use the results from Morazzoni and Sy (2022) that female-led firms are, on average, 10% more productive than male-led firms in the US as a key modelling input. We collect information on the gender distribution of firms in the countries analysed to estimate the associated gender gap. This will be lower for countries presenting higher gender parity and vice versa.

2. The shock: barriers are lifted so that there exists gender parity in the distribution of new firms entering the market

We propose a shock that, in practice for our modelling, involves an immediate change to gender parity in the number of *new* businesses entering the market. This means that we assume that the number of new firms entering the market each year once the barriers are lifted is split 50-50 between female and male-led firms. After this shock, we also assume that the new female-led firms face equal opportunities to establish and grow once they have been founded.

3. Market dynamics: resources in the market are reallocated towards more productive businesses

We use information on business entry as well as information on market growth to model the market dynamics of firm entry and exit. On average, the share of new firms relative to the number of existing firms is around 10% to 15% for the countries analysed, whereas the number of firms grows by 2% on average each year. This means that a proportion of firms will need to exist the market. Given that we assumed that gender-based barriers are lifted, it is the least productive (male-led) firms that exit the market.

The key assumption underpinning our modelling (i.e. that female-led firms are, on average, more productive than male-led firms) also has an important implication for the evolution of the gender gap over time. The gender gap observed is due to the barriers faced by female-led entrepreneurs, meaning that only the most productive can enter the market. Once the market has an even distribution, the average productivity of male and female-led firms must be the same. We call this the *tempering effect*: female-led firms entering the market present a decreasing productivity (i.e. every new firm entering the market is less productive than the previous one that entered) whereas the male-led firms staying in the market present an increasing productivity (i.e. firms leave the market in decreasing order of productivity).

Model limitations

- **The model is underpinned by strong assumptions that may not hold in practice.** For example, we assume that policies to address gender barriers will be able to achieve an even split in the distribution of new firms entering the market. This assumption is not unrealistic: the share of female-led businesses based among new businesses ranges between 35% to 46% in the countries considered in this study, according to GEM data. However, the success of these hypothetical policies to increase this share to 50% is uncertain.

- **The model relies on simplifying assumptions linked to data limitations.** For example, we have assumed that the productivity of male and female-led companies is intrinsically the same and equal to the average productivity of each country. This is a simplifying assumption that cannot capture nuances around sectorial distribution. In particular, female entrepreneurs may be less likely to operate in male-dominated sectors that may present different levels of productivity.

  In addition, total factor productivity data is not available for Poland. We assume that Poland's total factor productivity is the same as that of other countries in the model based on a benchmarking exercise that showed Poland's labour productivity is the highest amongst the 13 countries analysed.

- **The model relies on a number of proxies to translate the available data in inputs that can be modelled.** For example, female-led firms are defined as firms with majority

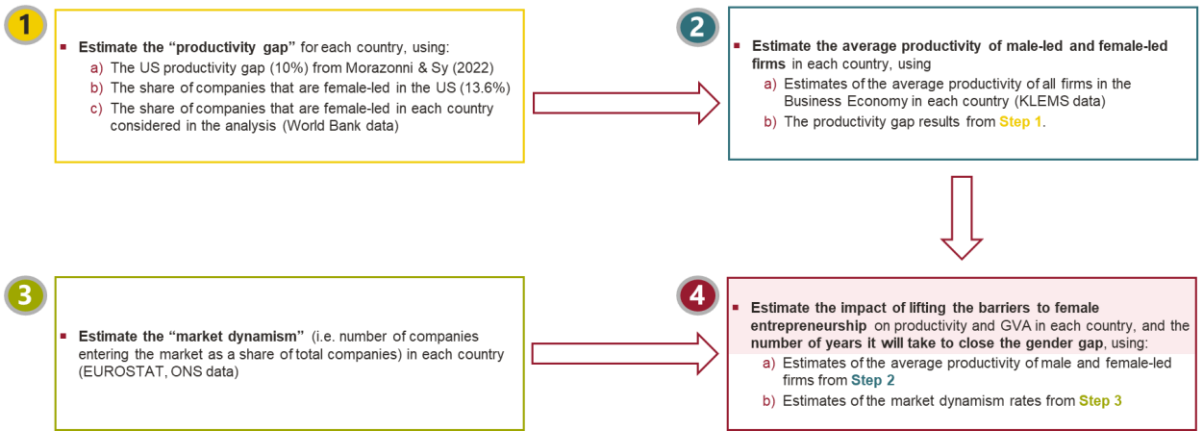
female ownership. Alternatively, we could have assumed that female-led firms are those with a top management that is majority female.

We have also assumed that the total number of new companies entering the market remains constant over time, although policies to incentivise innovation and competition may lead to increases in the degree of market dynamism.

A.2 Further details of the modelling approach

Figure 20 provides an overview of the modelling steps:

Figure 20 Overview of modelling steps



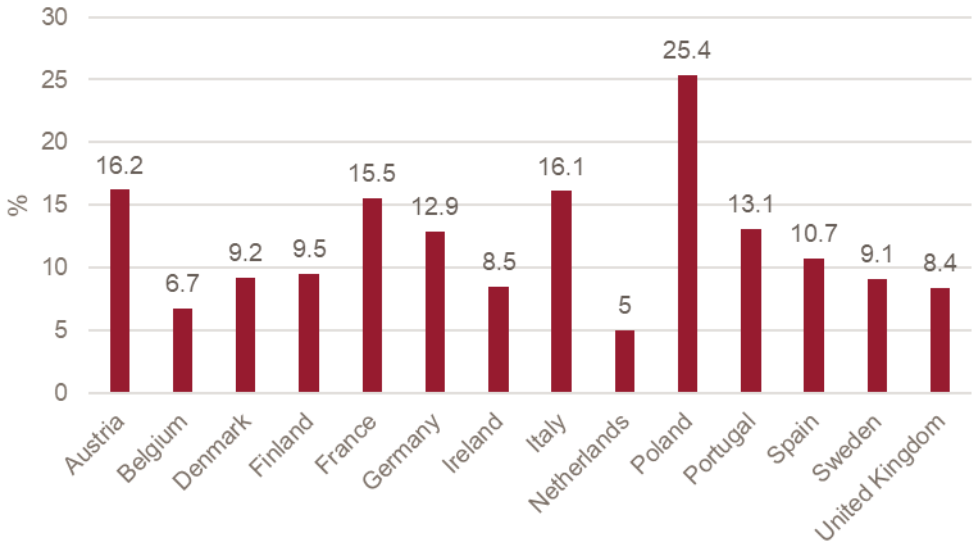
Source: Frontier Economics

First, we estimate the productivity gap for each country based on Morazzoni & Sy (2022) and the gender gap in the distribution of European firms

- Morazzoni & Sy (2022) estimate a productivity gap of 10% between female and male-led firms in the US.
- Female-led firms are not intrinsically more efficient. The productivity differential is driven by the barriers faced by female entrepreneurs, meaning that only the most productive companies make it past these barriers and into market.
- As such, the productivity gap is driven by the fact that only the most productive female-led companies are in the market. If the gender gap were to close, the productivity gap would do as well.

- In the US, 13.6% of companies are female-led[12]. Looking at the gender distribution of companies across the different European countries considered in this study (see Figure 21Figure 21) and based on the assumption above, we can estimate the productivity gap for each country (see Figure 22).

Figure 21 Gender gap in European firms: share of companies in the Business Economy with majority female ownership

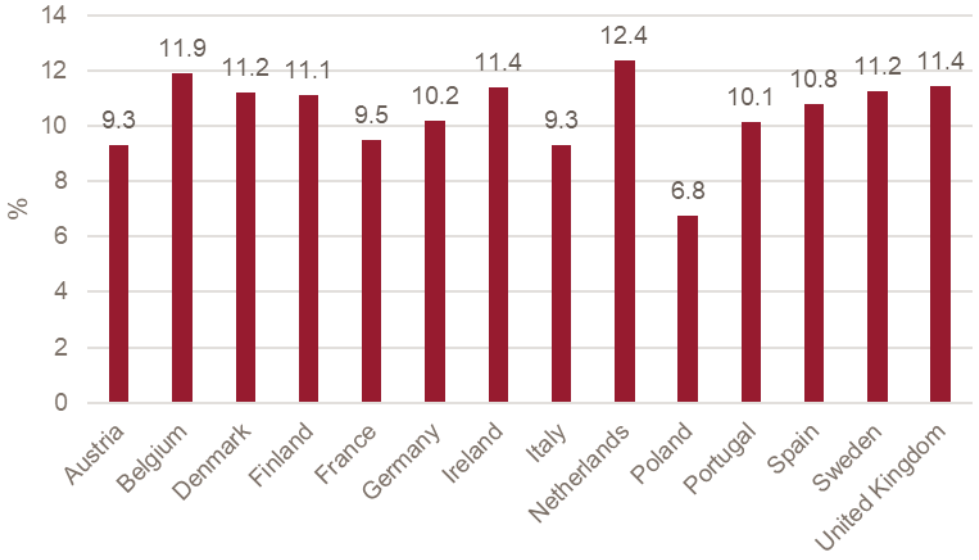


Source: *World Bank enterprise survey data*

[12] See Huang et al. (2025): https://www.nature.com/articles/s41599-024-04345-y

s companies with majority female ownership

Figure 22 Productivity gap in European countries

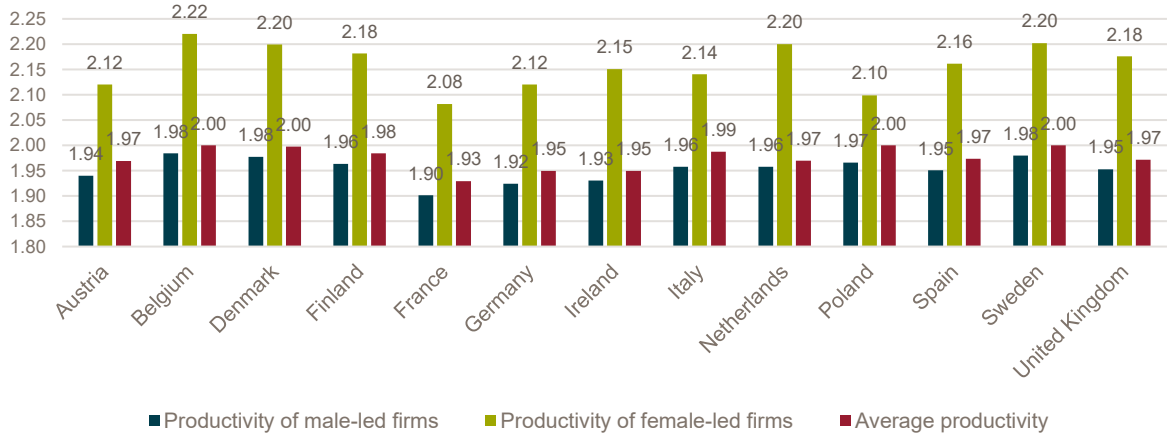


Source: Frontier Economics

Second, we estimate the productivity of male and female-led firms based on average productivity data from KLEMS and the productivity gap estimated in step 1.

- We estimate average country productivity using data from KLEMS on total GVA, total capital expenditure and total labour expenditure.
- Having estimated the average productivity per country and the productivity gap, we can estimate the average productivity of male-led firms and the average productivity of female-led firms (see Figure 23)
- We assume a classic Cobb-Douglas production function, in line with Morazzoni & Sy (2022).
- Productivity figures are based on GVA, total expenditure and labour expenditure in the Business Economy (all activity excluding section A – agriculture and O – public administration).
- Productivity for the Business Economy for Ireland is not available. We have imputed Germany´s total factor productivity given that productivity of the whole economy is most similar between Ireland and Germany.
- Total factor productivity data is not available for Poland. We imputed Poland´s with the highest total factor productivity of all countries based on a benchmarking exercise that showed Poland´s labour productivity is the highest amongst the 13 countries analysed.

Figure 23 Average productivity of firms by country and gender: male-led, female-led firms and all firms



Source: Frontier Economics

Third, we estimate the gender gap in the flow of companies entering the market, as well as the degree of market dynamism in the economy

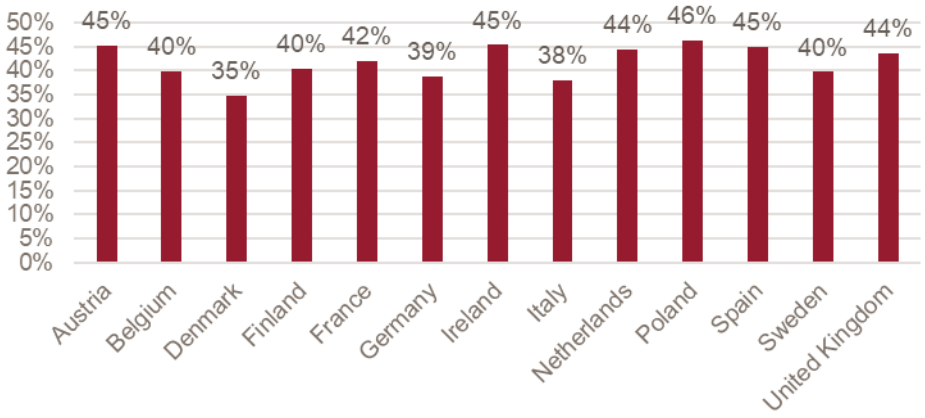
- We estimate the gender distribution of new firms entering the market in each country based on data on number of company births[13] population statistics[14] and the gender distribution of entrepreneurs from GEM[15].
- Although the gender gap is smaller in the flow (i.e. number of new companies entering the market), the share of new female-led companies is still below 46% for all the countries considered (see Figure 24)
- The countries considered present a varying degree of market dynamism: the share of new companies entering the market vs the total number of existing SMEs varies from 5% to 15% (see Figure 25). The higher the market dynamism, the faster the productivity gains can be achieved. This is because new, productive businesses enter the market more quickly, and existing, less productive businesses exit more quickly as well.

[13] From EUROSTAT and Gov.UK

[14] From EUROSTAT and Gov.UK

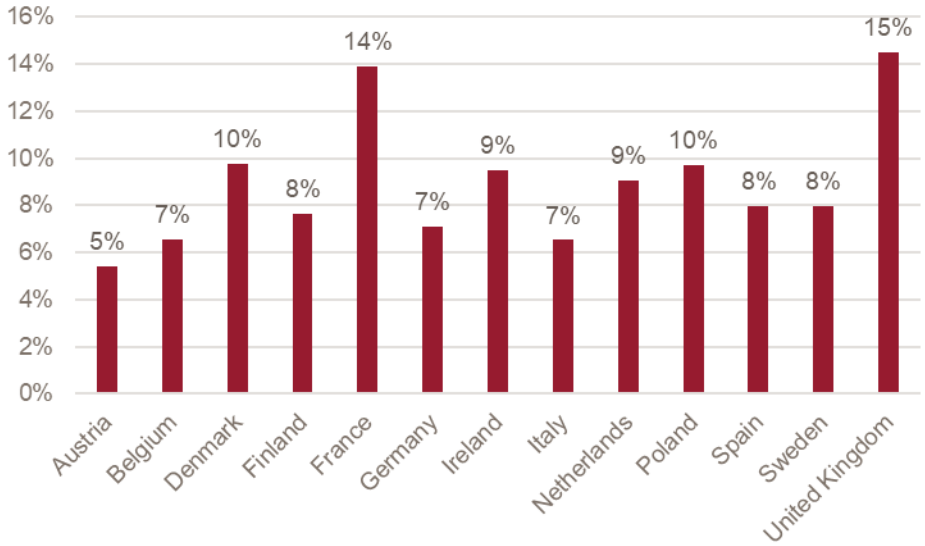
[15] Based on the % 18-64 male vs female: Setting up firm or owner of young firm (SU or BB)

Figure 24 Gender gap in the distribution of new European firms: share of female-led new companies in the Business Economy



Source: *Frontier economics based on data from EUROSTAT, Gov.uk and GEM*
Note: *[Insert Notes]*

Figure 25 Market dynamism: share of new companies entering the market vs total number of SMEs in the economy



Source: *Frontier economics based on data from EUROSTAT and Gov.uk.*

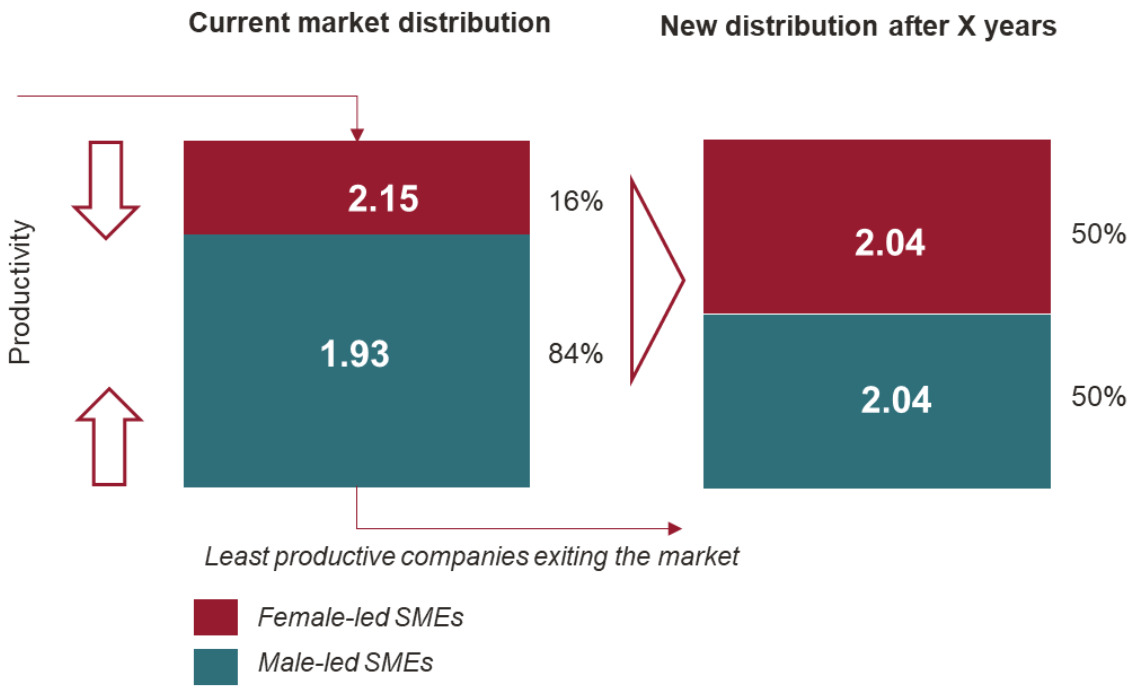
Finally, we estimate the impact on productivity and GVA from removing barriers to female entrepreneurship, leading to a 50:50 gender split in new business ownership

- On average, the growth rate in the number of firms is 2%. As discussed in the previous step, the number of new companies entering the market ranges from 5% to 15%.[16] This means that naturally there are companies exiting the market each year.
- If barriers to female entrepreneurship are lifted so that a higher number of more productive female-led businesses enter the market, this would lead to a reallocation of resources that will increase productivity (i.e. the most productive companies are likely to survive whereas the least productive companies will exit, leading to a higher average productivity).
- Eventually, the productivity of male and female-led firms will even out: the female-led companies entering the market will be less productive than the existing ones ("tempering effect"). The remaining male-led firms will be on average more productive than those leaving.

This dynamic is explained in Figure 26, where we show that the flow of more productive female-led businesses leads to the exit of least productive male-led businesses. The new female-led businesses that enter the market are more productive than the least productive businesses in the market, but less productive than the most existing female-led businesses in the market (since those had managed to face gender-barriers). As such, productivity of female led firms decreases over time while the productivity of male led firms increases over time until an equilibrium with a higher average productivity is reached.

[16] We assume the number of firms entering the market remains constant over time. To our knowledge, historic data trends on the number of company births in Europe is not available. However, for the UK we have not observed an increase in the number of births since 2% (average growth rate of -1%).

Figure 26 Diagram of model dynamics



Source: Frontier Economics

Annex B – Detailed survey methodology

In this annex we provide a detailed methodology of our survey and provide key summary statistics.

B.1 Background

In August 2025, we conducted a survey of businesses of all sizes, in six European countries: Denmark, Finland, France, Germany, Italy and Poland. There were roughly 100 respondents in each country. Respondents were typically founders or members in a senior role.

Respondents were asked to provided information on their gender, their businesses (e.g. industry, location, turnover) and then were asked a series of questions on the barriers to their businesses during the early stages of its growth.

The barriers were separated into five different categories, based on the literature: (i) markets and customers, (ii) regulatory and institutional, (iii) social and gender-specific, (iv) digital readiness, and (v) access to capital.

These questions were answered using a Likert scale, ranging 1 to 5. Respondents could also answer “don’t know” or “not applicable.” The potential responses were: (i) significant barrier; (ii) moderate barrier; (iii) minor barrier; (iv) minimal barrier; (v) not a barrier at all; (vi) not applicable; and (vii) don’t know.

For our analysis, we primarily focus on the “significant” and “moderate” barriers, as we found that majority of respondents considered all factors to be at least potential barrier in some way.

Background information

- **Businesses and respondent information**, where respondents were asked about: gender, education level, the location of the business headquarters, the sector in which the businesses operate in, the year the businesses were founded, number of employees, and annual turnover.
- **Businesses founders,** where respondents were asked if they were personally involved in founding the businesses, and if not, whether any of the founders were women.

Barriers to entrepreneurship

Respondents were then asked to about early-stage barriers to entrepreneurship, and how significant these barriers were likely to be. There were five barrier categories, each which included different specific barriers:

- **Markets and customers:** (i) Difficulty identifying or reaching potential customers, (ii) Limited knowledge of the target market, and (iii) Limited marketing expertise or budget.

- **Regulatory and institutional:** (i) complexity of administrative or registration procedures, (ii) uncertainty around tax rules and obligations, (iii) lack of accessible government support or incentives, and (iv) limited time or capacity to apply for funding or support programmes.
- **Social and gender-specific:** (i) lack of visible role models in business, (ii) lack of mentorship or peer support, (iii) challenges managing business alongside family or care responsibilities, (iv) social expectations or norms around gender roles, (v) gender bias or discrimination, and (vi) other bias or discrimination (e.g. related to ethnicity, age, disability or background).
- **Digital readiness:** (i) lack of basic digital skills (e.g. using email, spreadsheets, online tools), (ii) lack of confidence using business software (e.g. accounting, CRM, inventory tools), (iii) difficulty building or managing a website or online store, (iv) lack of knowledge about digital marketing or social media, and (v) limited awareness or understanding of how to sell on digital marketplaces (e.g. Amazon, Etsy, eBay).
- **Access to capital:** (i) limited access to finance or credit, an (ii) difficulty accessing investors or venture capital.

Supporting entrepreneurship

Respondents were then asked how the potential solution could assist in overcoming barriers. Respondents could select up to three choices per barrier. Respondents could identify if the solution could:

- Increase confidence to take the first step to start a business;
- Help someone develop or validate a viable business idea;
- Improve access to startup capital or resources;
- Improve ability to reach first customers or users;
- Reduce the time or complexity of getting a business started;
- Make it easier to balance starting a business with family or care responsibilities;
- Improve digital skills needed to launch a business; and
- Helped challenge social norms or expectations about gender roles

Respondents could also choose ‘other’ and provide an open-ended response.

B.2 Demographics

In this section we will summarise the key demographics. We found that:

- **Gender**: 54% of respondents were male, and 46% of respondents were female. France had the largest proportion of female respondents (51%), and Denmark had the lowest (41%).

- **Age**: 2% of respondents were between 18-24, 9% were between 25-34, 13% were between 35-44, 15% were between 45-54 and 27% were over the age of 55. Male respondents were likely to be older as 44% of male respondents were over the age of 55 compared to 28% of female respondents.

- **Education**: 2% of respondents stated they had a "low" level of education, 39% stated "medium" and 58% stated "high". Male and female respondents were likely to report similar levels of education. However, when asked about founder gender, female-founded businesses were more likely to report higher levels of education. For example, 62% of female-founded businesses reported "high" levels of education compared of 55% of male founded ones. The level of education also ranged across countries.

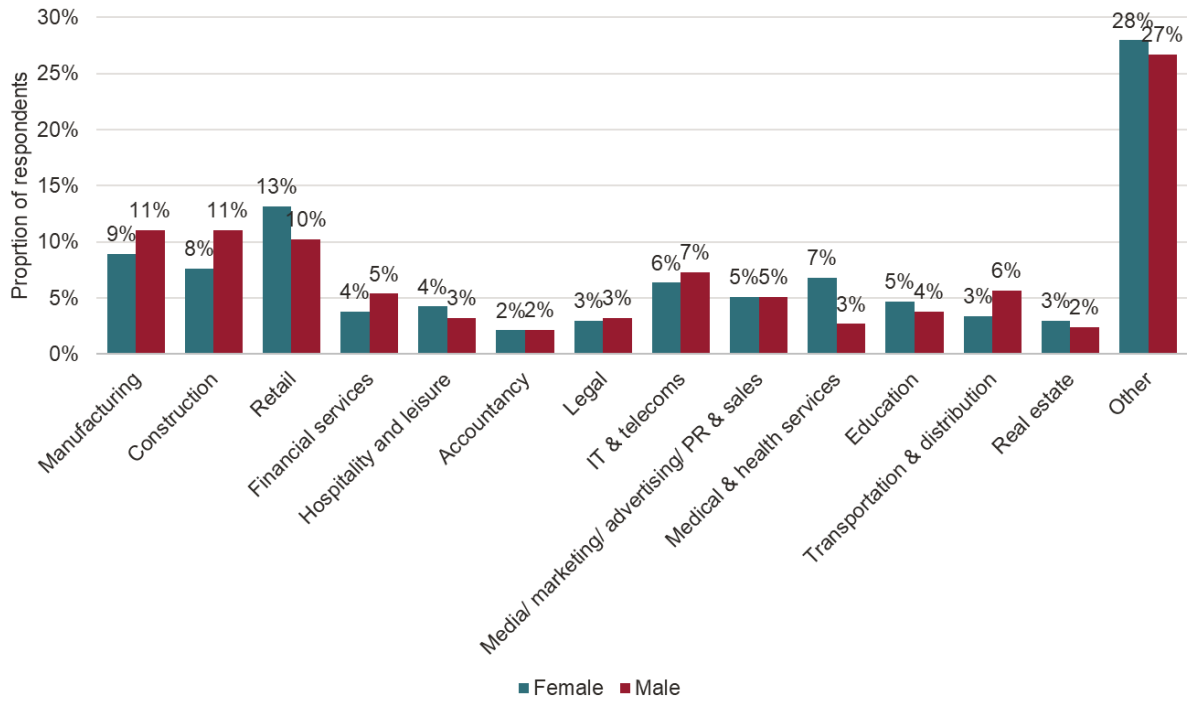
B.3 Company profile

In this section we provide a summary of the company information gathered in the survey.

Industry

As shown in Figure 27, respondents came from a variety of industries. Excluding "other", which comprised of nearly a third of respondents, female-founded businesses were more likely to be in retail and male-founded businesses were more likely to be in manufacturing or construction.

Figure 27 Industry by founder gender

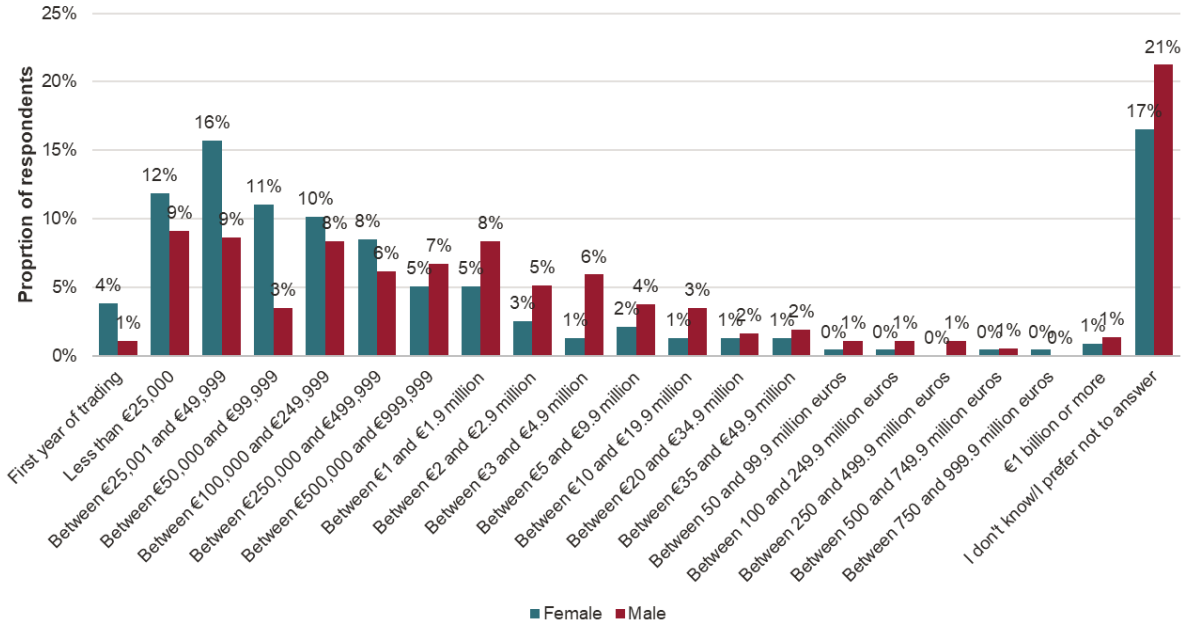


Source: Survey

Turnover

As shown in Figure 28, female-founded businesses were more likely to report revenue less than €100k (including those in their first year of trading). This was reported by 42% of female-founded businesses and 22% of male-founded businesses. Additionally, male-founded businesses were more likely to report revenue more than €1m. 35% of male-founded businesses reported having annual turnover more than € 1m versus 17% of female-founded businesses. However, 17% of female and 21% of male-founded businesses did not know their annual turnover.

Figure 28 Annual turnover by founder gender

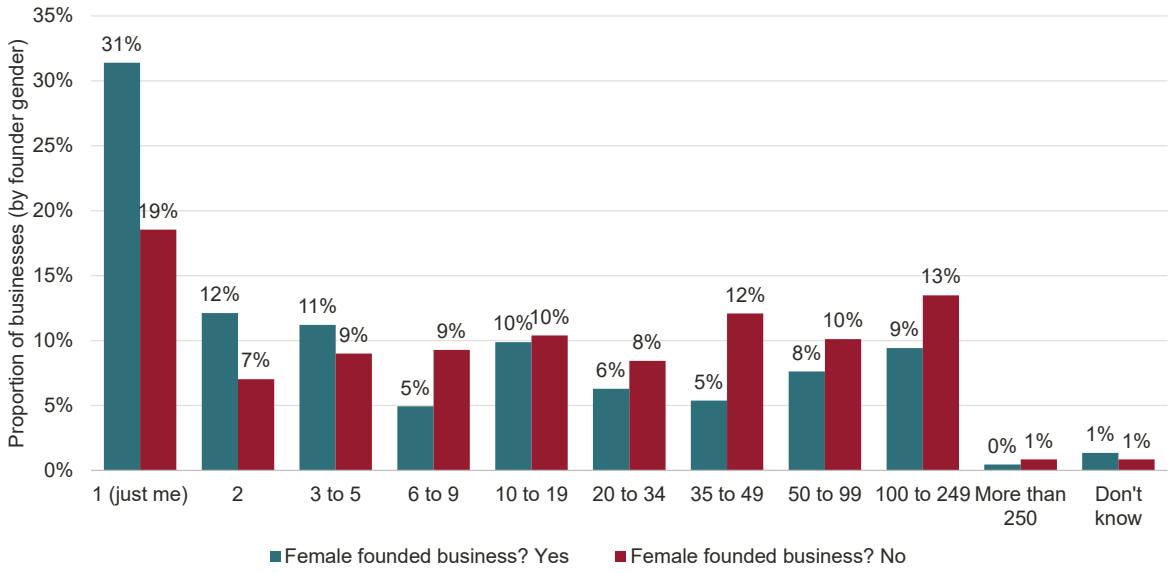


Source: Survey

Size

As shown in Figure 29, female-founded businesses were more likely to be sole owners, and male-founded businesses were likely to have larger companies. 31% of female-founded businesses were sole owned/run, compared to 16% of male-founded businesses. 45% of male-founded businesses had more than 20 employees versus 29% of female-founded businesses.

Figure 29 Company size by founder gender



Source: Survey

As shown in Table 3, we find that female-founded businesses in France and Italy are more likely to have less than five employees. For example, in France 77% have less than 5 people and in Italy it is 72%. We also found that female-founded businesses are larger in Denmark (e.g. 23% of female-founded businesses in Denmark had 100-249 employees).

Table 3 Business size, by country

Country	Founder	1	2	3-5	6-9	10-19	20-34	35-49	50-99	100-249
Denmark	Female	20%	14%	14%	6%	11%	3%	6%	3%	23%
	Male	3%	7%	3%	12%	7%	10%	15%	10%	32%
Finland	Female	26%	12%	15%	6%	18%	3%	-	12%	9%
	Male	20%	3%	11%	6%	14%	9%	11%	17%	11%
France	Female	53%	17%	6%	-	6%	2%	-	6%	9%
	Male	45%	6%	8%	6%	11%	2%	6%	8%	9%
Germany	Female	46%	8%	5%	10%	5%	10%	5%	8%	3%
	Male	24%	10%	8%	6%	13%	8%	13%	8%	10%
Italy	Female	33%	21%	19%	2%	5%	2%	7%	7%	5%
	Male	23%	10%	15%	10%	7%	13%	7%	10%	5%
Poland	Female	11%	8%	5%	5%	21%	16%	13%	11%	11%
	Male	8%	8%	11%	11%	13%	6%	19%	10%	14%

Source: Survey

Founders

As shown in Table 4, female-founded businesses were more likely to be sole founded. 46% of female-founded businesses were sole founded, compared to 28% of male-founded businesses. However, we do not that 31% of respondents who worked at female-founded businesses joined later at a senior role, versus 44% of those who worked at male-founded businesses.

Table 4 Founder status, by founder gender

	Female founded	Male founded
Sole founded	46%	28%
Co-founded	23%	12%
Joined later at a senior role	31%	44%
Other	0%	14%
Prefer not to say	0%	2%

Source: Survey

When we look at the country specific results (Table 5), there is higher levels of female sole ownership in Germany (59%), France (57%) and Italy (56%). We find that co-foundership is the highest in Finland at 41%. A significant portion of respondents joined both female and male-founded businesses later in Denmark and Poland potentially signalling barriers to early founding opportunities for women in these countries.

Table 5 Female founder status, by country

Country	Founder	Sole founder	Co-founder	Joined later	Other	Prefer not to say
Denmark	Female	43%	14%	43%	0%	0%
	Male	7%	7%	66%	18%	1%
Finland	Female	29%	41%	29%	0%	0%
	Male	21%	6%	39%	32%	2%
France	Female	57%	19%	23%	0%	0%
	Male	55%	6%	25%	15%	0%
Germany	Female	59%	8%	33%	0%	0%
	Male	32%	15%	45%	5%	3%
Italy	Female	56%	30%	14%	0%	0%

Country	Founder	Sole founder	Co-founder	Joined later	Other	Prefer not to say
	Male	30%	22%	33%	12%	3%
Poland	Female	26%	26%	47%	0%	0%
	Male	30%	14%	52%	2%	2%

Source: Survey

B.4 Calculations

In our final analysis we excluded observations which were identified as “don’t know” or “not applicable” this is for the following reasons:

- **Accuracy of insights**: “don’t know” and “not applicable” responses do not provide a definitive answer and could dilute the representativeness of the actual data. However, we found that this was typically a small proportion of the responses with the exception of Denmark.
- **Focus on target population**: "Not applicable" often indicates the respondent does not meet the criteria for that question.
- **Enhance comparability**: Removing “don’t know” or “not applicable” responses makes results comparable across questions and demographics, as the base reflects only those who could reasonably answer.
- **Consistency**: Key findings usually highlight meaningful trends. Including ambiguous responses could lead to misleading interpretations.

Thus, the proportion of significant or moderate respondents is calculated as:

$$Proportion\ which\ considers\ a\ barrier\ significant\ or\ mdoerate_{by\ founder\ gender} = \frac{(signficant + moderate)_{by\ founder\ gender}}{(significant + moderate + minor + minimal + not\ a\ barrier)_{by\ founder\ gender}}$$

Overall, across all questions, 75% of responses were substantive, with respondents selecting an answer rather than “don’t know” or “not applicable”. With the exception of the below, all questions had a substantive response rate of over 70%:

- Limited awareness or understanding of how to sell on digital marketplaces (e.g. Amazon, Etsy, eBay) – with a substantive response rate of 64%;
- Difficulty accessing investors or venture capital – with a substantive response rate of 66%;
- Other bias or discrimination (e.g. related to ethnicity, age, disability or background) – with a substantive response rate of 67%;

- Gender bias or discrimination with a substantive response rate of 68%; and
- Social expectations or norms around gender roles with a substantive response rate of 69%.

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