

Interactive policy brief Issue 24/2018

# Women, Technology and Entrepreneurship

## How European Women Use Technology to Get Ahead and Why It Matters for Europe as a Whole



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It's well known that women enjoy an unequal role in the workforce, though Europe is making important progress in this area.<sup>1</sup> Workforce participation rates for women rose to 65.5% of the European workforce in 2017, up from 62.2% in 2010, (though the rate for men, at 77.4%, is still nearly 12% points ahead).<sup>2</sup> The gap is even wider at the level of chief executive officer and top management. There, women make up only 5.7% of the CEOs of Europe's 613 largest publicly-listed companies. And only 23.9% of board members.<sup>3</sup>

But what about the 23 million small- and medium-sized businesses (SMBs), the backbone of Europe's economy, which account for 66.8% of employment and 57.4% of gross value added?<sup>4</sup> How do women fare in this key sector of the economy? And – just as curiously – how are they adapting to the spread and use of modern technology, a key component of SMB growth?<sup>5</sup>

The answer is, “it's complicated.”

Morning Consult, a global research bureau, surveyed 6004 SMBs in six European Union countries (France, Germany, Italy, Poland, Spain and the United Kingdom) to find out how women are faring in the management and staffing of Europe's largest economic sector.<sup>6</sup> The survey also posed key questions regarding the use (or non-use) of technology – both for social and for business purposes – hoping to shed light on who is (or isn't) adopting technology quickly enough, and who might (or might not) be reaping the rewards. Among the key findings:

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The interactive policy brief seeks to make knowledge more accessible through online distribution, interactive features, such as hotlinks to articles cited in the footnotes and bibliography, and a web-friendly format.

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1  
The authors would like to thank [Morning Consult](#), a leading online market research bureau, that polled 6004 entrepreneurs in six countries (France, Germany, Italy, Poland, Spain and the United Kingdom) in 2017. The survey forms the backbone of this study, and was funded and initiated by [Facebook](#). For more on the data parameters and the analysis constructed for this policy brief, see the [Note on Methodology](#) on page 2. The authors would also like to thank Marianne Cooper, Christopher Doty, Kyle Dropp, Paul Hofheinz, Aleksandra Kozik, Tim Lyon, Saumya Malhotra, Laura McGorman, Chrysoula Mitta, Cristina Moise, Francesco Mureddu, Aneesh Raman, Marianna Scharf and Maxine Williams.

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[European Commission, 2017 Report on Equality between Women and Men in the European Union \(Brussels: European Commission, 2017\).](#)

3  
Ibid.

# 'At the C-suite level, women working in SMBs are 7% to 8% more likely to be found using social media to grow their businesses.'

4 [European Commission, Annual Report on European SMEs 2015/2016 \(Brussels: European Commission, 2016\).](#)

The European Commission refers to "small- and medium-sized enterprises," but the authors of this paper uses the term "small- and medium-sized businesses." The two terms mean the same.

5 See especially [Ann Mettler and Anthony D. Williams, Wired for Growth and Innovation: How Digital Technologies are Reshaping Small- and Medium-Sized Businesses \(Brussels: The Lisbon Council, 2012\).](#)

6 Collectively, these six countries account for 72% of EU GDP.

- 1) **A Decision-Making Gap.** Many women work in SMBs, but they are still less likely to be found in senior management positions. Concretely, 27% of the women working for European SMBs were in management (director or above). By contrast, 35% of the men working in SMBs were in management positions. The problem is particularly ironic when you consider that the women working for SMBs are more qualified. Of the sample surveyed, 59% of the women held university degrees; only 50% of the men were so qualified. See Chart 1 on page 3 for more.
- 2) **A Technology-Adoption Gap.** Overall, women seem to use social media for business purposes a bit less than men – though the differences are small (See Chart 2 on page 3 for more). However, when you look exclusively at the women inside SMBs who succeed, the gender gap stands on its head. At the C-suite level, successful women working in SMBs are 7% to 8% more likely to be found using social media to sell products, solicit customers and manage internal business than men. And, when women do use technology, they report better results and more success than men do. See Table 1 on page 6 and Chart 5 on page 5 for more.

There are many explanations for these somewhat unusual findings. Some might argue that the evidence shows yet again that women who succeed are not only better than men, but that they have to be that very much better than men to break through the gender barrier. They reach for every tool they can, in other words. They deploy those tools effectively. And they try harder than men to make sure that what they do leads to success.

But the data also points to an interesting emerging reality: there is increasing difference in performance among women themselves. Some women are "pulling ahead," seizing the new opportunities as and when they present themselves. And those who do show far higher technology adoption rates than other women. On the contrary, successful men do not stand out among their peers in terms of technology adoption. Overall, the gap in technology adoption between C-level, mid-level and staff-level women in SMBs is far greater.

## Methodology

In 2017, Morning Consult surveyed 6004 small- and medium-sized businesses in six European Union countries (France, Germany, Italy, Poland, Spain and the United Kingdom) to understand better the gender balance within these SMBs as well as the use and rate of technology adoption. The businesses ranged in size from one to 500 employees. Later, analysts at the Lisbon Council, applying iterative post-stratification weights, used the "t-test" in order to compare the difference in means between male and female respondents. A cut off rate of 5% for judging statistical significance was set, and, unless explicitly indicated, only significant results are presented here. In the sample, there were 2270 women, 3733 men (one data point had a missing value for sex). For the analysis of differences in SMB C-suite level responses, the sample contained 352 female C-suite executives and 733 C-suite males.

# 'Small- and medium-sized businesses account for 66.8% of employment and 57.4% of gross value added in the European economy.'

## Women and Entrepreneurship: A Work in Progress

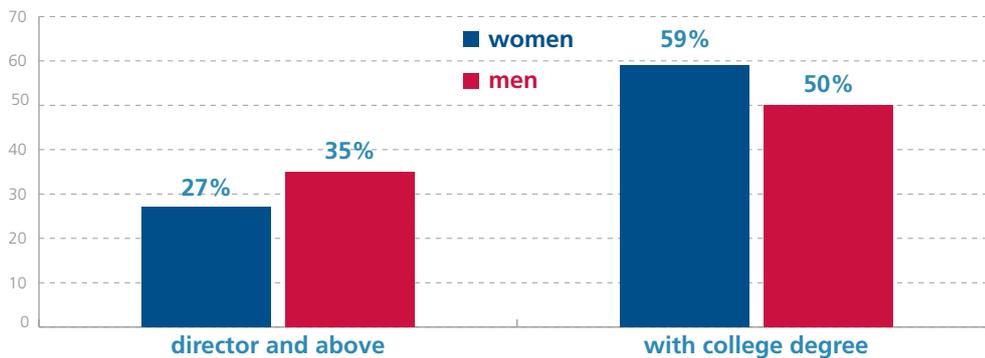
The data also points to some persistent gender lags in important areas that don't always make headlines. Women, for example, are roughly equal with men on the use of technology and social media for business purposes in SMBs (women would seem to use it a bit less than men, though the difference is below the level of statistical significance. See Chart 2 and Chart 3 for more). But women who do use social media at work seem to draw different conclusions than men. Put simply, men who use social media successfully are more likely to go out and start a new business with it than women.<sup>7</sup> See Chart 4 on page 4.

The survey shows that women are less likely than men to use the Internet for work related purposes, although the differences there are relatively small.<sup>8</sup> The evidence here and elsewhere is that technology adoption rates are not so dissimilar between women and men, which suggests that at a minimum technology adoption is not acting as a structural barrier on women's path to the top.

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The data confirms a trend reported elsewhere. Around 19% of men in the active workforce could be classified as "entrepreneurs." For women, the figure is 10%, according to a recent study conducted for the European Commission. [Panteia. Statistical Data on Women Entrepreneurs in Europe \(Brussels: European Commission, 2014\).](#)

8  
This is also in line with trends reported elsewhere. The OECD says that "in most countries, gender differences in the use of software at work are small." See [OECD, "Going Digital: The Future of Work for Women" in The Pursuit of Gender Equality \(Paris: OECD, 2017\)](#)

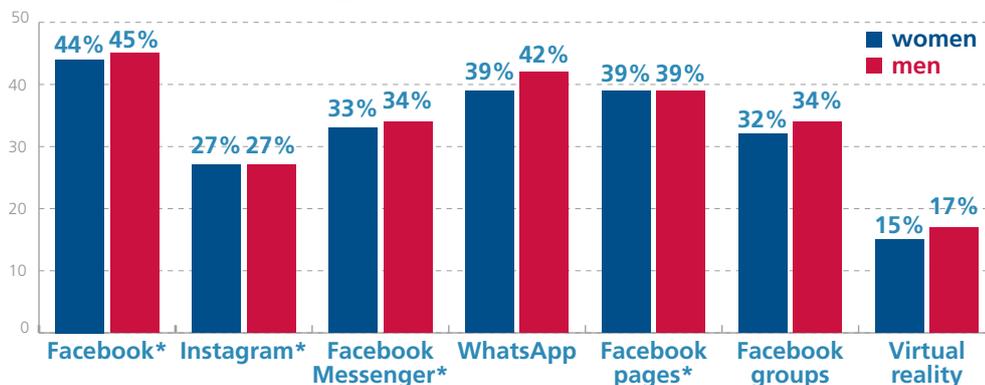
Chart 1. Position in the Company and Educational Attainment



Source: Morning Consult data, Lisbon Council calculations

Chart 2. Daily Users for Professional Purposes

(\* = not statistically significant)



Source: Morning Consult data, Lisbon Council calculations

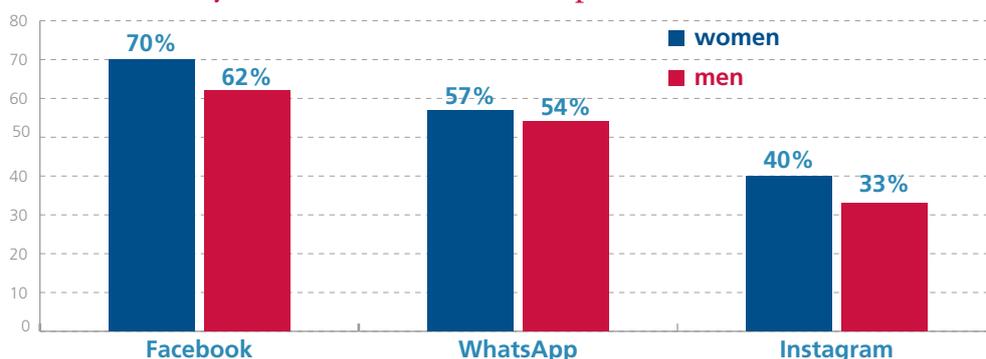


## 'When women use technology, they report better results and more success than men do.'

But the place where you really see a difference regarding technology adoption is in the path of some women to the top. Women executives in SMBs are more likely to use social media to drive their business forward than men (see Table 1 on page 6 and Chart 5 on page 5). And they are much more likely to use social media to drive business than women still in middle- or staff-level occupations (see Table 2 on page 7). While causality is always difficult to demonstrate in cases like this, the data does point to two very interesting possible explanations. First, women who make it to the C-suite are more prepared than their male counterparts in terms of higher educational attainment rates and technology adoption may be just an aspect of this. Second, ambitious technology adoption – while spread evenly between men and women – could help some women to attain decision-making positions.

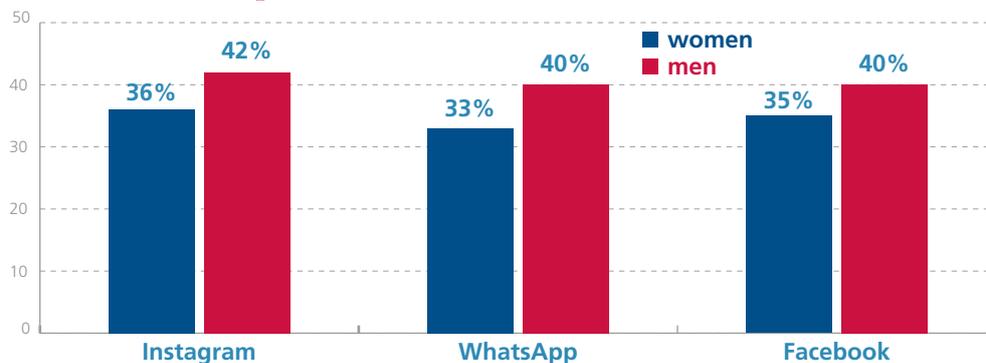
And the differences are visible not only in career paths, but also in the successful results that female entrepreneurs obtain from their businesses. Women using social media in work not only show greater career advancement at personal level, they also report more tangible results from the social media they deploy. Around

Chart 3. Daily Users for Personal Purposes



Source: Morning Consult data, Lisbon Council calculations

Chart 4. Percent of Respondents that Agree with the Statement: "After I started using ... for my business, I left my day job to become an entrepreneur."



Source: Morning Consult data, Lisbon Council calculations

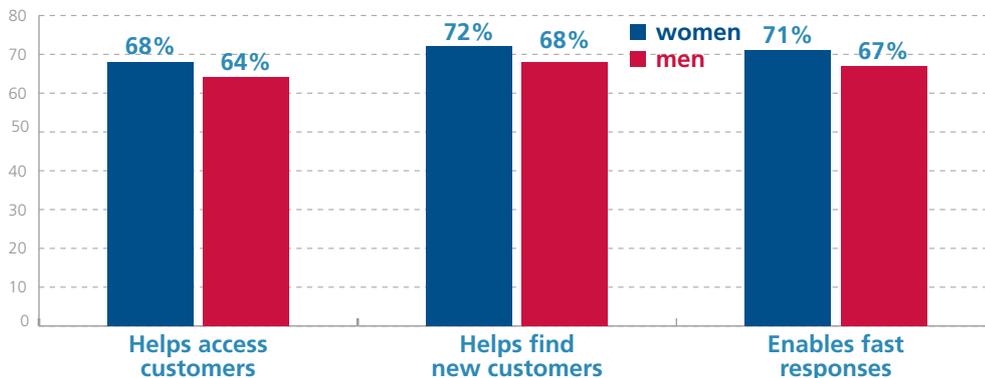
# 'There is increasing difference in performance among women themselves.'

25% of the women polled reported that more than half of their revenues derive from online business (for men, the figure was 22%). And 12% of women said that more than half of their revenue comes from Facebook (only 11% for men). See Chart 6 below. Astonishingly, of the SMBs surveyed, one in four already make more than 50% of their revenue online.

## Policy Recommendations

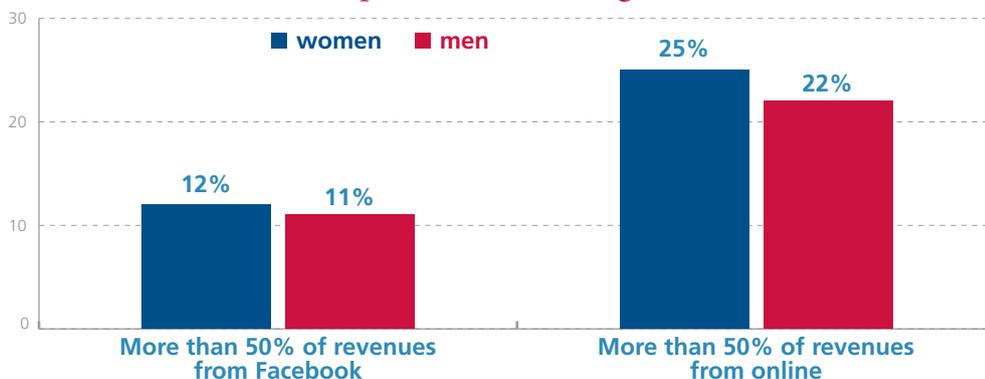
The results illustrated in this relatively small sample are fascinating and instructive. On balance, it would seem that there is very little difference in the pattern and scope of women and men adopting technology in the workplace – they seem to be doing that in roughly equal numbers. What would seem rather different are the results achieved. Put simply, women who embrace social media – who use it effectively in their business, and make an extra effort to ensure that the business grows and expands in the digital space – are the ones who are rising to the C-suite inside the organisations they lead.

Chart 5. Percent of Respondents Who Agree with the Statement that Facebook:



Source: Morning Consult data, Lisbon Council calculations

Chart 6. Percent of Respondents Who Agree with the Statement:



Source: Morning Consult data, Lisbon Council calculations

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# 'Men who use social media successfully are more likely to go out and start a new business with it than women.'

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[The Economist, "The Spread of Gender Quotas for Company Boards," The Economist, 25 March 2014.](#)

10  
[European Institute for Gender Equality, "Graduates in Tertiary Education" in Gender Statistics Database, EIGE.](#) A similar study from the U.S. shows that around 42% of the STEM-field doctor of philosophy degrees (PhDs) granted in the U.S. go to women; by contrast, women make up more than 52% of all PhDs awarded. See [Wikipedia, Women in STEM fields](#) for a good overview.

11  
 The European Union also has two flagship programmes for promoting better gender balance in STEM professions. First and foremost, the Horizon 2020 Programme, through which the EU will disburse an estimated €80 billion of research funding over a six-year period, boasts gender as "a cross-cutting issue" which "is mainstreamed in each of the different parts of the work programme, ensuring a more integrated approach to research and innovation." There is also a [EU Prize for Women Innovators](#), which gives out four cash awards each year to leading European innovators who happen to be female.

12  
[Suzan Lewis, Bianca Stumbitz, Lilian Miles and Julia Rouse, Maternity Protection in SMEs: An International Review \(Geneva: International Labour Organisation, 2014\).](#)

So if the core problem isn't caused by uneven technology adoption, what could possibly be done to remedy the apparent gender imbalance – in listed companies and in SMBs alike? Here, the survey is too small to form firm, evidence-based judgments. Instead, we rely on a broad literature review – which begins on page 8 – for help and guidance. First and foremost, we suggest that female entrepreneurs and working women of all types seize the reins and seek the opportunity for themselves. But none of this will be enough if the policy framework is not conducive and supportive. We propose a four-point programme:

- 1) **Demand More C-Suite Jobs and Board Seats.** Norway is a pioneer in this field. In 2006, it introduced a 40% quota for female representation at listed-company board level. A decade later, 42% of board seats in Norway belong to women – a world record.<sup>9</sup> Obviously, SMBs are different from listed companies, but a set of targets – even soft ones – can help to focus minds and exert quiet pressure towards better outcomes. Some of the best talent inside of organisations is female. And that talent can and should be promoted as and when the moment comes.
- 2) **Increase Science, Technology, Engineering and Mathematics (STEM) Educational Opportunities.** An important issue already, access to and adoption of STEM education seems ready to rise in relevance in the years to come. Put simply, there may not be a big gap on technology adoption, but there is a big gap on STEM skills acquisition. The European Institute for Gender Equality reports that, while 24.9 men graduated from university with STEM-related degrees for every 1000 members of the population between the ages of 24 and 29 in 2015, only 13.1 women did.<sup>10</sup> This could have a devastating effect over time, as future management jobs will require more STEM knowledge. The balance could be improved dramatically with more scholarships for women, better programmes geared directly to them and more prevalence of science-based role models for young girls.<sup>11</sup>
- 3) **Install Simple, Easy-to-Afford Maternity Facilities.** Parenting – and its impact on the workforce and families – is a sore subject for many SMBs, which often struggle with the cost and commitment.<sup>12</sup> Nonetheless, there is a "frugal"

Table 1. Daily Users for Business: Difference between Women and Men (\* = not statistically significant)

	All respondents	C-Level respondents
Facebook	-1%*	+7%
Instagram	-0%*	+7%
FB Messenger	-0%*	+4%*
WhatsApp	-3%	+4%*
Facebook Pages	-0%*	+8%
Facebook Groups	-1%	+4%*
Virtual Reality / VR	-2%	-1%*

Source: Morning Consult data, Lisbon Council calculations

# ‘Maternity rooms cost relatively little, and can be of great help to employees who have children.’

solution. Maternity rooms cost relatively little, and can be of great help to employees who have children. The balance between work and life can and should be made easier to manage. And SMBs are in a position – through vision and leadership – to show the way on this. This is not just an issue for helping women stay in the workforce; it’s an issue for the quality of family life in general. Better care facilities make it easier for open, balanced distribution and re-distribution of career and parenting responsibilities – across the genders and throughout careers.

13 [European Commission, Making Public Procurement Work in and For Europe \(Brussels: European Commission, 2017\).](#)

14 [Paul Hofheinz, The Ethics of Artificial Intelligence: How AI Can End Discrimination and Make the World a Smarter, Better Place \(Brussels: Lisbon Council, 2018\).](#)

- 4) **Make Sure Public Procurement is Progressive.** SMBs make up 99% of the economy, but they only receive 45% of the roughly €2 trillion proffered each year through public procurement contracts.<sup>13</sup> Regardless of the gender-balance situation, more public procurement should be assigned to SMBs each year. Proposal quality and value for public money should always be the most important factors when assigning bids, but we support a preference for initiatives that can demonstrate an ambitious gender approach along with the skills and vision required.

Finally, these results should be put in the perspective of the fast-evolving context of technology at work. The status quo, and its implications, can change radically with the diffusion of new technology in the workplace and the arrival of new ways of working it so often implies. The introduction of artificial intelligence (AI) and the increasing prevalence of self-employment are just two of the changes that will affect the way human beings and society create wealth – and sustain their communities.<sup>14</sup>

Technology will play a key role in these changes, and small differences in technology adoption today could have big implications for the future. Most jobs today can be done with a limited familiarity with digital technology, but that may not always be the case. AI and machine learning jobs may well need more and better qualified specialists to manage them – especially in the high-end, quality-job spectrum.

Women are among the economy’s biggest, most valuable assets. Gender balance is not only a moral issue; it’s also an economic issue. Excluding women from taking their proper place in senior management takes a toll on the economy – and leads to lower living standards for all. But bringing women into the workforce and encouraging

**Table 2. Difference in Daily Use of Social Media: C-Suite Versus Non C-Suite Respondents**

	Women	Men
Facebook	+18%	+9%
Instagram	+15%	+7%
FB Messenger	+15%	+10%
WhatsApp	+20%	+11%
Facebook Pages	+18%	+9%
Facebook Groups	+16%	+9%
Virtual Reality / VR	+7%	+5%

Source: Morning Consult data, Lisbon Council calculations

## 'The status quo can change radically with the diffusion of new technology in the workplace.'

15  
[Paul Hofheinz, "Making a Progressive Future of Work," Policy Network, 22 May 2017.](#)

more of them to become entrepreneurs is not simply a matter of shattering glass ceilings or finding more traditionally male-dominated roles for them to perform. It's a matter of restructuring, reimagining and retooling working life to make it easier for women to be a fully-empowered part of it. That's a project whose parameters are well beyond the scope of this policy brief. But it's a useful place to begin the discussion. And a place where society's most innovative companies – the online businesses that are knocking down borders and driving the digital revolution – could have the largest contribution to play. They could – and many do – lead by example.

The spread and ubiquity of online tools also provides a special opportunity, as this and other policy briefs have shown. Put simply, online tools and social media make it easier to engage a workforce flexibly.<sup>15</sup> And they open up the opportunity to design, co-design and rethink workplace practice around a set of rules that can (and should) sit more comfortably alongside the people who work within them. This has huge implications for women in the workforce. It is perhaps no surprise that successful women were the first to see and grasp this opportunity. The data presented in this policy brief shows that they are well on their way. Though progress will require not just new attitudes. It will also require a social and political environment that is visionary, supportive and conducive to change.

Clearly, technology will play a major role in determining the future of work and the parameters of entrepreneurship; it will lead to many new opportunities, both for the entrepreneurs who seize them but also for the society in which they live and work. The combination of dramatically accelerating social trends and powerful new technology can lead to lasting change. It is up to policymakers – and the voters who give them their jobs – to make sure that Europeans set the right priorities and get the balance right.

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