

Impact of the COVID-19 Pandemic on Women's Entrepreneurship in the European Union: Challenges and Opportunities - A Literature Review

Maria Eleni Tsiopoulou

Mandoulides High School, 12th km Highway Thessaloniki – N. Moudania, Thessaloniki, 57001, Greece; marilenatsiopoulou@outlook.com

ABSTRACT: Women's entrepreneurship drives economic growth by launching new businesses, which boosts economic activity and spurs innovation. Female entrepreneurs frequently tackle social challenges, resulting in wider societal advantages. Additionally, they offer unique insights, enhancing diversity and strengthening resilience. This article aims to analyze the impact of the COVID-19 pandemic on women's entrepreneurship in the European Union (EU) by reviewing recent and relevant literature, studies conducted in member states, and official statistical data. The COVID-19 pandemic intensified existing challenges and brought about new difficulties, yet it also created fresh opportunities. The lasting effects are still emerging and are expected to influence the future of women's entrepreneurship in Europe for years to come. A range of policy responses and support measures issued by the governments of member states aimed to mitigate COVID-19's severe impact on businesses, including those owned by women. Further research is needed to provide invaluable insights into how future global crises can have minimal impact on women entrepreneurs, guiding policymakers and stakeholders in designing and building an inclusive, equitable, resilient, and sustainable entrepreneurial ecosystem for women in the EU.

KEYWORDS: Business, Entrepreneurship, Women, European Union, Covid-19.

■ Introduction

The COVID-19 pandemic has fundamentally reshaped economic landscapes across the globe, with particularly profound impacts on entrepreneurship.¹ When, on March 11th, 2020, the World Health Organization declared the pandemic, government-mandated containment policies, such as social distancing, widespread lockdowns, school closures, and restrictions on travel, movement, and people gatherings, resulted in economic activities being severely curtailed, trade being disrupted and an estimated 114 million jobs being lost in 2020 worldwide.² Scholars argue that the pandemic-related crisis can be at least comparable with the global financial crisis (GFC) of 2007-2009.³⁻⁶

In the European Union (EU), entrepreneurs faced unique challenges, such as vast uncertainty, existential risks, liquidity problems, threats of bankruptcy, and massive declines in income and sales as they navigated this unprecedented socio-economic crisis.⁷⁻¹⁰ Thus, the COVID-19 pandemic imposed an important exogenous multiple-period shock on entrepreneurial activities, particularly in the service industry and in small and medium-sized (SME) enterprises.¹¹⁻¹⁴ Female enterprises within the European Common Market mostly operate in the services sector, retail, and tourism, which were the most exposed to the economic and social effects of the pandemic.^{15,16} Therefore, scholars agree that during the pandemic, women entrepreneurs, regardless of their socio-economic status and vulnerability, had to face a disproportionately larger impact, compared to men.¹⁷⁻²⁰ Nevertheless, scholars conducting qual-

itative and quantitative research with SME business owners and managers from different sectors of the economy found that some enterprises even benefited from the pandemic by exploiting new opportunities and establishing practices of crisis management, showcasing a speed of adaptation towards the new technology and digital solutions, and, ultimately, resilience and sustainability.²¹⁻²⁵

This literature review aims to deliver a thorough and systematic analysis of the COVID-19 pandemic's impact on women's entrepreneurship within the EU, emphasizing the diverse challenges they have faced and the new opportunities that have emerged. It also seeks to introduce a fresh perspective to entrepreneurship studies by acknowledging that gender issues are often overlooked during economic crises. Identifying gender-specific barriers and opportunities during the pandemic and understanding the impact of female-led businesses is crucial for overall economic recovery efforts in the EU. Reviewing the recent scholarship, compiling, and analyzing secondary data on women entrepreneurs is crucial for understanding their needs and informing policymakers about the specific requirements of female entrepreneurs to develop effective and equitable support policies. This is essential for minimizing the negative impact of future crises.

■ Methodology

A systematic literature review was conducted using Google Scholar, searching for relevant papers published in English between 2019 and 2024. The following keywords were used: "COVID-19," "Pandemic," "Women and Entrepreneurship,"

and “European Union.” Additionally, data from Eurostat databases, the Organization for Economic Co-operation and Development (OECD) databases, and the Global Entrepreneurship Monitor were processed. Studies that met the eligibility criteria were assessed based on their titles, abstracts, methodologies, discussions, and conclusions. Ultimately, 55 papers were considered eligible and included in this literature review.

To analyze the identified papers on the impact of the COVID-19 pandemic on women entrepreneurship in the EU, a structured and systematic approach was applied. Relevant data were extracted from each paper, focusing on research objectives, methodologies, key findings, and conclusions. The extracted data were then organized and analyzed into four key categories: (1) the state of women's entrepreneurship in the EU before the pandemic, (2) the impact of the COVID-19 pandemic on women's entrepreneurship in the EU, (3) opportunities for women entrepreneurs during the pandemic, and (4) policy responses and support measures. A thematic analysis revealed several key themes, including the disproportionate burden of caregiving on women entrepreneurs, the acceleration of digital transformation as a survival mechanism, and the importance of targeted policy support to foster resilience and recovery. These themes were compared and contrasted within each category to provide broader insights into the challenges and opportunities faced by women entrepreneurs in the EU during the pandemic.

To further assess the impact of the COVID-19 pandemic on female entrepreneurship in the EU, eight specific research papers involving surveys and statistical analysis of responses collected during the pandemic were analyzed. These papers were selected because they specifically focused on women entrepreneurs in the EU and were large-scale studies, providing comprehensive and statistically significant insights into the impact of the COVID-19 pandemic.

The European Union was chosen for this study due to its diverse economic and social landscape, offering a valuable context for examining the impact of COVID-19 on women's entrepreneurship. With 27 member states, the EU allows for a comparative analysis of how different national policies and economic conditions have influenced entrepreneurial outcomes during the pandemic. Additionally, the EU's significant role in global trade and policymaking makes the findings from this region particularly relevant and applicable on a broader scale.

■ Literature Review

Many researchers view women's entrepreneurship as a significant phenomenon of the 21st century, particularly in developing countries.^{26, 27} The dynamics of entrepreneurship play a vital role in driving economic growth and social development, contributing to economic stability during challenging times with high unemployment. By fostering new startups, women's entrepreneurship enhances an economy's creativity, competitiveness, and overall productivity.²⁸ Women entrepreneurs tend to search for change and its exploitation as an opportunity, using innovation as a specific entrepreneurial tool. An increase in the rate of female entrepreneurs generates pos-

itive effects on the economic conditions and social well-being of both developed and underdeveloped countries.²⁵

The OECD and European Commission report that men are more likely than women to start and oversee new businesses.²⁹ From 2016 to 2020, 8% of the men's labor force in the European Union (EU) was involved in total entrepreneurial activity (TEA), compared to 5% of women. Similarly, in OECD countries, 13% of men and only 9% of women were involved in starting and managing young firms.²⁹ According to The Startup Heatmap Europe, only 15.5% of Europe's founders are female, and only 7% of Venture Capital (VC) funding in Europe goes to startups with a female founding team member. In particular, the share of women working in the Information and Communication Technology sector in Europe was 17% in 2019.³⁰ In 2019, more than 10 million women were entrepreneurs in the EU Member States.¹⁹

Immediately after Severe Acute Respiratory Syndrome Coronavirus-2 was declared a pandemic, every European government imposed a lockdown that led to the total closure of schools and all educational institutions, public places, and most companies. During this period, all EU Member States closed their borders. However, the severity of these measures varied by country.¹⁹ Following this initial measure, there was a phase of gradual reopening, during which people had to live with the virus by adopting specific security measures. This phase also included the reopening of businesses.

Most companies across the EU were negatively impacted.³¹ For instance, 43.2% of Italian businesses reported severe financial difficulties, and 97.2% were significantly affected by the pandemic's negative economic consequences.³² Even with the introduction of government support measures, 51% to 58% of EU companies reported financial difficulties after three months of lockdown.¹¹ Small and medium-sized enterprises (SMEs) suffered greater revenue declines relative to their total assets compared to larger companies. Sectors reliant on human interaction, such as the cultural and tourism industries, were particularly hard-hit by the crisis.³³ For instance, Greece's tourism sector experienced a dramatic decline, with a 63.3% drop in activities during the first half of 2020, contrasting with a slight 0.7% increase in the same period the previous year.³⁴

Recent research has extensively examined how small enterprises respond to crises and build resilience. The ability to prepare and implement effective crisis management strategies is crucial for the survival of these businesses. While preparedness is key to resilience, the unprecedented nature of the COVID-19 pandemic made it nearly impossible for most enterprises to anticipate. Nonetheless, a robust crisis management approach could have facilitated quicker recovery or even growth. Past crisis experiences indicate that small enterprises benefit from their flexibility to adapt to changing circumstances. Equipped with self-executed methods, they mobilize available resources and continually adjust plans to seize opportunities. Unlike larger companies, small enterprises often do not follow rigid management schemes.

Female entrepreneurs responded to the pandemic in various ways. In their large-scale study, Koltai *et al.* report that half of the respondents sought adaptation strategies, one-third intro-

duced new products or services, bolstered their online sales, or explored new markets.¹⁹ Over one-third focused on long-term developments to enhance prospects, such as maintenance and development activities during lockdowns, employee training, procuring new production means, or implementing home delivery. Additionally, over half of the respondents utilized some form of support measure. The correlation between the crisis measures adopted and the ability to overcome the pandemic's challenges varied significantly depending on the extent to which enterprises were affected. For instance, enterprises less impacted by the crisis often did not take action yet managed to maintain or improve their economic situation, while those facing negative impacts were more likely to adopt adaptive or reduction measures to mitigate losses.¹⁹

Since the onset of the COVID-19 pandemic in 2019, governments worldwide have faced the dual challenge of addressing immediate health concerns and managing the economic and welfare implications of pandemic measures, restrictions, and closures. The European countries were affected differently by the course of the pandemic; therefore, the protective measures were very different in every country. The declaration of a state of emergency was one of the first decisions in most countries, as well as the restriction of public events and the introduction of quarantine requirements for those coming from abroad. In many countries, strict police controls were also introduced along with the restrictions. All countries encouraged remote working (home office), where possible. Also, childcare and educational institutions were closed everywhere, and distance education was introduced.

Policy support measures for SMEs in the EU have not been differentiated based on the owner's gender. The primary goal of the support measures was to ensure the survival of businesses. In the first two to three months following the pandemic's outbreak, 50% of the surviving businesses reported income losses. According to the OECD 2020 report, countries implemented various support schemes for businesses and the self-employed, including reductions, deferrals, or cancellations of social contributions and taxes. Other forms of support included emergency capital, specific unemployment aid, tax moratoriums for SMEs and self-employed individuals, and temporary mortgage payment suspensions. Structural policies were not widely employed and, when used, primarily focused on remote working and digitalization.

■ Results

State of Women Entrepreneurship in the EU Before the Pandemic:

In the European Common Market, female-led enterprises predominantly function as small and medium-sized businesses, with many women entrepreneurs being self-employed. Experts contend that these small and medium-sized enterprises are more vulnerable to social distancing measures due to their inherent fragility and lower resilience. These enterprises possess fewer amounts of capital and reserves to mobilize, or they are less flexible in adapting to changes in supply chains.^{35,36} Despite this, their significance is highlighted by the fact that small and medium-sized enterprises constitute 99.2% of all

companies in the EU, employing 66.4 million people and contributing significantly to economic value (Eurostat).

According to GEM, women in developing economies are much more likely to start their own businesses than those in high-income countries, with approximately 25% of women in low-income countries and 13% in lower-middle-income countries compared to approximately 10% globally.^{23,37} The reason for this is the fact that these women evaluate entrepreneurship as a way to find better incomes for their families, underlining the major distinction between opportunity and necessity entrepreneurship, a push and pull factor, respectively.²⁴ Opportunity entrepreneurship aims to capitalize on perceived market possibilities and takes advantage of new business opportunities. It is more commonly seen in developed member states in the EU, with higher levels of Gross Domestic Product (GDP), mainly located in Western and Northern Europe.³⁸ Necessity entrepreneurship occurs when there are few or no alternative possibilities for successful labor market involvement, and starting a new business is the best option available.

Although the negative viewpoint of most European societies about women's attainment of independence and wealth is being left behind, female entrepreneurs continue to face multiple obstacles in their journey.³⁹ Discrimination against women's participation in the workplace persists and is greatly influenced by social stereotypes and cultural norms.⁴⁰ Gender biases affect women's perception of their entrepreneurial abilities and access to opportunities. Women are generally less confident in their capabilities and more likely to be deterred by failure, suggesting that cultural factors may be at work influencing this gender gap and some social network differences in ecosystems as well.⁴¹ Brieger *et al.* argue that higher socioeconomic, cultural, and institutional gender egalitarianism supports women's empowerment.⁸ They underline a substantial gap in this area between Eastern and Western Europe, with the latter ranked highest for gender equality in the 2020 Global Gender Gap Index.⁸ Child and elderly care norms are highly gendered within all European societies; women often shoulder a larger share of domestic and care work than men. Among parents, mothers are traditionally the main providers of childcare and accumulate a disproportionate amount of housework, which poses additional obstacles to female entrepreneurship.⁴² Balancing entrepreneurial pursuits with family responsibilities is a significant challenge for many women.

There are significant differences between the entrepreneurial income of women and men. This difference might be explained by the lower wages of women and the higher proportion of women in part-time jobs. Differences among males and females in enterprising also appear in terms of obtaining the initial capital to fund their businesses. Scholars argue that insufficient access to funding during the startup phase is the most significant issue for entrepreneurs.⁴³ Surveys and questionnaires completed by women entrepreneurs across several European member states highlight a persistent gender gap in access to credit.^{19, 23, 44} Women frequently report facing significant challenges in securing funding for their businesses, underscoring ongoing disparities in financial support. Female borrowers often receive fewer loans and face higher

interest rates. Gender bias is evident when finance providers evaluate startup proposals, with women more frequently questioned about their commitment, legitimacy, and credibility. Additionally, women are required to provide more detailed information about their businesses compared to men. According to Martínez-Rodríguez *et al.*, institutional discrimination is a primary factor behind the financial challenges women face.²⁴

Evidence from the world of equity investment suggests that women business owners and leaders face discrimination in the equity investment pipeline. According to the Women's Entrepreneurship Report 2018-2019, released by GEM, women in Europe cited a lack of financing about 10% more often than men, at 11.3% compared to 10%.³⁷ The situation is the same when accessing training and resources, which are extremely important for starting a business. OECD data from 2019 underlines one of the main challenges that women face before launching their business: in each European country covered, the rate of women having access to training is lower than their male counterparts.³⁵

Nevertheless, the average global business discontinuance rate is approximately 10% lower for women (2.9%) compared to men (3.2%). Business discontinuance rates decrease as country-level income increases, with the lowest rates for women being found in Europe at 1.4%.⁴¹ These findings also highlight that women entrepreneurs are exceptionally resilient and passionate about sustainability, working diligently to integrate sustainable practices into their businesses.

Impact of the COVID-19 Pandemic on Women Entrepreneurs in the EU:

As shown in Table 1, the analysis of qualitative and quantitative studies, involving surveys and statistical analysis of responses, reveals the impact of COVID-19 on female entrepreneurship in the EU.

Table 1: Analysis of qualitative and quantitative studies on the impact of COVID-19 on female entrepreneurship in the E.U.

	Country	Sample	Results
1	De Simone <i>et al.</i> , 2021	Italy 137 women entrepreneurs	<ul style="list-style-type: none"> Women experience greater conflict between work and family roles than men When family negatively interferes with work, perceived firm performance success decreases. Personal fulfillment must be sacrificed to enhance perceptions of financial success. Establishing good relationships is a key factor in influencing the success of women entrepreneurs.
2	Stephan <i>et al.</i> , 2020	UK 361 entrepreneurs 272 men / 88 women	<ul style="list-style-type: none"> 60.9% of Business' existence was threatened Trading: 9.2% suspended / 61% decreased / 10.3% increased 7% of males / 16% of females expanded into online trading/delivery Male: 16,740 Female: 18,540 perceived stress Women entrepreneurs are opportunity-driven 63.3% small business model Impact: 39.3% Moderate decline 32% Steep decline 14.7% Moderate growth 12.7% Stagnation / no effect
3	Birsan <i>et al.</i> , 2022	Romania 320 entrepreneurs 112 men / 208 women	<ul style="list-style-type: none"> Changes in the operations of a firm and changes in its activity. Temporarily close or suspend businesses. 90% are unable to continue activities the way they used to do before. Often, employees had to be fired or required to take compulsory leave. 21% adapted to online sales and promotion 1/3 were positive about the future Women entrepreneurs report more work-family conflict than men entrepreneurs. Work-family conflict mediates the relationship between being a female entrepreneur and psychological well-being. Larger gender gaps in work-family conflict in macro-level contexts with low socio-economic, institutional, and cultural gender egalitarianism. The negative indirect effect of gender on psychological well-being is weaker at higher versus lower levels of socio-economic, institutional, and cultural gender egalitarianism.
4	Gergely <i>et al.</i> , 2021	Romania (Transylvania) 84 women entrepreneurs	<ul style="list-style-type: none"> Female-led firms are: 4% more likely to close their businesses than male-led 1.2% more likely to report revenue reduction 3.9% more likely to cut their workforce 12.9% lower sales than 2019
5	Brieger <i>et al.</i> , 2023	27 European countries (Eurofound's Living, Working and COVID-19 e-Survey)	<ul style="list-style-type: none"> 79% of the women-led businesses were negatively affected 8% believed that the pandemic improved their businesses' opportunities 33% significantly worsened the situation of the enterprise 31% slightly worsened the situation of the enterprise 13% not affected 13% improved the situation of the enterprise 10% decrease in the total number of employees
6	Goldstein <i>et al.</i> , 2022	50 countries globally 150,000 business owners	<ul style="list-style-type: none"> Self-employed are: 42% more likely to report losses of gross income 30% more likely to report reduction in working hours than employees. Self-employed women are 33% more likely to experience income losses than men

7	Koltai <i>et al.</i> , 2020	7 European countries (Andalusia in Spain, Austria, Bulgaria, Czech Republic, Hungary, Serbia, Transylvania)	1,681 women entrepreneurs	<ul style="list-style-type: none"> 79% of the women-led businesses were negatively affected 8% believed that the pandemic improved their businesses' opportunities 33% significantly worsened the situation of the enterprise 31% slightly worsened the situation of the enterprise 13% not affected 13% improved the situation of the enterprise 10% decrease in the total number of employees
8	Graeber <i>et al.</i> , 2021	Germany	155 Female / 156 Male self-employed	<ul style="list-style-type: none"> Self-employed are: 42% more likely to report losses of gross income 30% more likely to report reduction in working hours than employees. Self-employed women are 33% more likely to experience income losses than men

Female entrepreneurs in the EU faced greater work-family conflict, higher business closures, and financial instability during COVID-19, with most experiencing moderate to steep declines in business performance.

According to De Simone *et al.*, women entrepreneurs in Italy encountered more significant challenges than men, including liquidity issues, supply chain disruptions, job losses, access to credit, and technological difficulties.³² Their research also suggests that women entrepreneurs understand the need to sacrifice family time and prioritize work to achieve entrepreneurial success and enhance firm performance, especially during the pandemic, which increased women's workload both in their occupations and in their housework. They conclude that difficulties related to risk management and uncertainty in managing one's own company, especially during the pandemic, can negatively impact perceived entrepreneurial success in terms of personal financial rewards and fulfillment. This highlights that interpersonal resources are a decisive factor for women entrepreneurs during this crisis.

A study conducted in London revealed that 93% of respondents were negatively impacted by the COVID-19 pandemic, while 4% reported no impact. Among those affected, 44% had temporarily suspended operations, and 3% had permanently ceased them.²⁰

According to a King's Business School study on 361 entrepreneurs, 88 of whom were women, "on balance the Covid-19 pandemic impacted women entrepreneurs more adversely than men entrepreneurs".²⁰ Women-led businesses suffered a greater reduction in trading and women entrepreneurs scored higher in perceived stress than their male counterparts, slightly more often raising concerns about the survival of their businesses. However, their social response to the crisis was stronger. They more often than men gave money and volunteered their personal time and business offerings to support charities or noble causes.

In their empirical research, undertaken in March 2021, Birsan *et al.* state that their hypothesis, which suggests that the female entrepreneurial business model has helped keep Romania's unemployment rate below the European average, has proven to be true.⁴⁵ Their study also confirms that women entrepreneurs often choose to rely on their own strengths rather than government support, which can create vulnerabilities during times of crisis, such as the COVID-19 pandemic. However, it also highlights the resilience of female entrepreneurship.⁴⁵

In another Romanian survey, all respondents reported being significantly impacted by the COVID-19 situation. Specifically, 20% reduced their activities, 18% partially interrupted them, and 19% ceased their activities entirely.⁴⁶ Gergely *et al.*, in their study on the responses of 84 Romanian female

entrepreneurs, highlight that administrative and bureaucratic obligations doubled due to the pandemic.⁴⁷ They assert that reduced sales and the associated loss of income were major concerns for female entrepreneurs, who were not prepared for an income loss of this magnitude. It is reported that 21% of female entrepreneurs implemented adaptation strategies due to the COVID-19 situation. These strategies primarily involved shifting to online platforms and rapid digitalization, as well as using online networks, which became their primary means of communication with clients.

Evaluating the gender differences in entrepreneurs' work-family conflict and well-being during COVID-19, Brieger *et al.* highlight that women entrepreneurs with employees faced greater challenges juggling family and employee demands during the pandemic.⁸ Women entrepreneurs with children were particularly stressed, while those without employees benefited more from socio-economic, institutional, and cultural gender egalitarian contexts, which helped reduce their work-family conflict during the pandemic. In their study, they found that psychological well-being during the COVID-19 pandemic was positively correlated with gender egalitarianism, but negatively correlated with being a woman and work-family conflict. Specifically, work-family conflict showed a positive correlation with being a woman and socio-economic and institutional gender egalitarianism, but a negative correlation with cultural gender egalitarianism.

Goldstein *et al.* conducted a study using data collected from over 150,000 business owners via Facebook across 50 countries during 2020–2021.⁴² Their findings highlight that globally, female-led firms were, on average, 4% more likely to close their businesses than male-led firms in 2020. In addition, women entrepreneurs were 1.2% more likely to report a reduction in revenues compared to their male counterparts. Women-led businesses also experienced a larger drop in sales, averaging 12.9% lower sales relative to 2019, compared to male-led businesses. Furthermore, women-led businesses were 3.9% more likely to completely cut their workforce than male-led businesses. These findings underscore the disproportionate impact of economic challenges on women entrepreneurs, further contributing to gender inequalities in the entrepreneurial landscape. The authors emphasize that policy decisions made due to COVID-19's impact will have significant long-term implications for women's economic empowerment and gender equality. They advocate for governments to actively engage in promoting social dialogue that challenges traditional gender roles where men are seen as breadwinners and women as caretakers, and supports workplace flexibility.⁴²

Koltai *et al.* examined 1681 responses from women entrepreneurs across seven European countries.¹⁹ 79% of the women-led businesses were negatively affected, while 68% of the responders reported a 28% decrease in their annual income in 2020. However, women entrepreneurs working in the field of tourism and hospitality claimed a 50% loss in their annual income. The number of employees in the responding enterprises run by women decreased by 10%. Nevertheless, some respondents reported that their businesses will benefit in the long run. Specifically, 23% managed to introduce new

products, and 14% saw growth in online sales. Half of the respondents sought adaptation strategies, and over a third began initiatives that could enhance their business prospects in the long run. Based on several indicators, it appears to be significant that enterprises more active in the online space before the pandemic were more resistant to the effects of the pandemic.¹⁹

Lastly, Graeber *et al.* indicate that self-employed individuals face a higher risk of income losses due to the COVID-19 pandemic compared to employees, with women being about one-third more likely than men to experience such losses.⁴⁸ This gender gap was not observed among employees. Their findings indicate that the disparity among the self-employed is largely due to women being more concentrated in industries most severely impacted by the pandemic. Furthermore, their analysis reveals that women are disproportionately affected by government-imposed restrictions, such as reduced operating hours.⁴⁸

Reflecting a global trend, women in Europe are much more likely to engage in businesses in wholesale and retail trade or government, health education, and social services. These industries tend to have lower entry barriers, lower margins, and higher failure rates, specifically in times of crisis, which can be constraints on sustainability and performance.⁷ A significant portion of female-led enterprises operate in sectors severely impacted by pandemic restrictions, such as tourism, hospitality, and personal services. Many of these small businesses lack the liquid capital necessary to weather crises and do not possess the tools to digitize their services. Startups and small enterprises are among the most vulnerable players in the economy.⁴⁹ As a result, since most female-led businesses are small and many women entrepreneurs are self-employed, their ventures are especially vulnerable to the economic downturn brought on by the pandemic. Research shows that self-employed women are about one-third more likely to experience income losses due to COVID-19 compared to men.^{50,51} The most significant gender disparities among the self-employed stem from the fact that self-employed women are more frequently employed in industries hit harder by the COVID-19 pandemic than their male counterparts. Women-owned businesses face substantial revenue declines, cash flow problems, and challenges in fulfilling financial commitments. While several government support measures were implemented across Europe, they were not always effectively targeted towards women-owned businesses, leading to disparities in access to aid and securing loans and investments.

Moreover, evidence indicates that gendered household responsibilities also play a role in the income loss disparity. Notably, 19% of households saw a change in the primary earner during the pandemic.¹⁹ In most cases, this shift involved men from couples with roughly equal salaries becoming the main earners. However, in some instances, women relinquished their role as the primary earners. Studies indicate that women entrepreneurs, on average, dedicate nearly 2 hours less to their business activities on a typical weekday compared to their male counterparts. Instead, they allocate these 2 hours to fulfilling caregiving responsibilities and household duties. This time disparity highlights the additional domestic burdens women face,

which can impact their business productivity and growth. The extra caregiving responsibilities not only reduce the time women can invest in their entrepreneurial ventures but also underscore the broader societal expectations and pressures placed on women to manage both professional and domestic roles. Specifically, female entrepreneurs in their 40s appear to have faced the most challenging situation during the pandemic, as they reported the highest proportion of childcare responsibilities at 72%. Additionally, they also reported a significant share of regular elderly care duties, at 39%. This pandemic-induced blurring of work and personal and family life may have long-lasting effects on women's ability to balance entrepreneurial pursuits with family responsibilities.

Opportunities for Women Entrepreneurs during the Pandemic:

An impact analysis conducted by the Canadian Women Entrepreneurship Knowledge Hub in 2020 found that female entrepreneurs are less likely to use online tools than their male counterparts.⁵² However, the majority of women entrepreneurs in the EU had already been using more online tools before the pandemic. Over half of them regularly used three to five online tools. Nonetheless, 27% of female enterprises had not used any online tools before the pandemic.¹⁹ During the pandemic, women entrepreneurs frequently used online tools such as offering services via online sales, working from home, setting up home offices, facilitating internal online communication, and leveraging digital marketing tools like social media and Google. Social media was the most popular online tool, with 82% of European women entrepreneurs using it to some extent. Besides specialized online software, online communication tools within the company, and online sales, remote work was the least utilized, with most entrepreneurs reporting they had never used it in their business operations.¹⁹ However, 15% of them worked exclusively remotely, which helped them adapt more flexibly to the restrictions.

In several instances, respondents reported impacts that could potentially strengthen their enterprises. Specifically, 23% of the respondents were able to introduce new products during the pandemic, and 14% saw an increase in online sales. Additionally, 23% of respondents launched new product services, while 10% identified new market opportunities.¹⁹ These developments highlight how the pandemic has driven innovation and market expansion for some women-led businesses, despite the broader challenges faced.

There was a significant correlation between the effects of the pandemic and the use of online tools. Female entrepreneurs whose businesses were not negatively affected or were positively impacted by the pandemic had already been using online tools more frequently before the pandemic began. This finding may be partly explained by the fact that sectors less affected by the pandemic were those where the nature of the activities allowed for the use of online tools. In contrast, the sectors most severely impacted by pandemic restrictions were those requiring personal presence. The correlation between online presence and the effects of the pandemic is also evidenced by the fact that enterprises that used more online tools anticipated smaller income losses compared to those that used

fewer or no online tools before the pandemic. Various indicators suggest that businesses more active in the online space were more resilient to the pandemic's impacts.

Therefore, it is accurate to say that the pandemic solidified the shift to e-commerce.⁵⁵ Many women entrepreneurs viewed the pandemic as an opportunity to accelerate the existing trend towards more digital offerings and trading, from B2B marketplaces to increased demand for digital advertising, search engine optimization, and remote learning. Entrepreneurs saw increased digitalization as a chance to access new, geographically distant markets that were previously costly to reach. The pandemic accelerated the shift to online shopping, allowing women entrepreneurs to set up online stores and broaden their customer base.

Women entrepreneurs are innovating in how they run, produce, and transform their businesses, with a strong focus on leveraging technology effectively. They are developing websites, exploring online marketing strategies, and seeking online solutions. In response to the pandemic, various sectors have adapted their approaches: professional services, training, and education have embraced online communication channels, while retail and food manufacturing sectors have focused on reaching customers through delivery services. Additionally, the pandemic has opened new market opportunities for products and services related to health, hygiene, remote work, and online education. As customer preferences shifted towards local and sustainable products, women entrepreneurs in these areas have benefited significantly.

The extent to which women entrepreneurs were able to capitalize on new opportunities during the pandemic varied significantly across EU member states. Countries with robust digital infrastructure and supportive policy environments saw greater success, while women entrepreneurs in less-equipped regions often struggled due to a lack of resources and support. Despite the crisis creating new avenues for growth, these disparities highlighted existing inequalities that need to be addressed to foster women-led economic advancement. Nevertheless, the pandemic may have also sparked the emergence of a new generation of resilient and adaptable women entrepreneurs, equipped to overcome adversity and seize opportunities in the evolving business landscape.

Policy Responses and Support Measures – Implications:

It is important to note that all European countries implemented a mix of measures addressing labor regulations, tax and loan deferrals, and financial instruments. However, most of these measures were aimed at businesses with employees, whereas many female entrepreneurs and self-employed individuals, as previously noted, do not have employees.

The support measures utilized by female entrepreneurs in the EU, listed in order of popularity, were wage subsidies, tax discounts, deferred tax payments, and various credit schemes, including deferred payment and supported credit options.¹⁹ Across Europe, various sector-specific support measures were introduced, including discretionary monthly lump-sum payments for SMEs. These fixed-amount payments were potentially more accessible for small enterprises and the self-employed, requiring less administrative effort compared

to wage subsidies, which were more commonly used in other countries.

This review has significant policy implications not only for future pandemics but also for other disruptions, such as natural disasters and civil political unrest, which could disproportionately impact women at a scale similar to or approaching that of a pandemic. Entrepreneurs, particularly women, have been disproportionately affected by the systemic shock of the COVID-19 pandemic, partly due to the policy measures implemented to control the virus's spread. This issue is particularly relevant given the gradual increase in women choosing entrepreneurship. If women feel less supported by policies during such crises compared to female employees, there is a risk they might turn away from self-employment, potentially widening the gender gap in this sector. This could have negative repercussions for economic growth, especially in areas that heavily rely on female entrepreneurship.

Therefore, policy measures designed to alleviate economic hardships during future crises should consider these disparities. Since government-imposed restrictions contribute to this unequal impact, targeted policies to restore gender equity are especially important. Additionally, since entrepreneurs have been particularly affected by the COVID-19 pandemic, policymakers might consider specific measures to support them. In a broader sense, any support scheme for entrepreneurs could have both negative and positive externalities that need to be balanced. Self-employment and entrepreneurship positively influence growth, so support schemes that help individuals remain self-employed during crises could aid in economic recovery post-pandemic.

■ Discussion

The World Economic Forum estimated that COVID-19 would push back the timeline for closing the global gender gap across key dimensions—economic participation and opportunity, educational attainment, health and survival, and political empowerment—from 99.5 years to 135.6 years.⁵⁰ To provide a thorough review of the pandemic's impact on women-led businesses and the challenges female entrepreneurs face in balancing their business and family roles, eight primary studies were examined and analyzed.

In all the European countries studied, the vast majority of women entrepreneurs are leaders of micro or small enterprises. Many of these entrepreneurs are self-employed, with some being necessity-driven or forced into entrepreneurship. Due to their size, these women-led businesses are more vulnerable. In addition, a substantial portion of female entrepreneurs operate in sectors severely impacted by coronavirus restrictions, such as tourism and personal services. In sectors where personal presence plays a bigger role, pandemic measures had a major negative impact. SMEs in the service sector, i.e., retailing, tourism, hospitality, and transport, suffered the most from the restrictive measures, which significantly limited the service retail and were compounded by the closure of educational institutions.⁵¹ Those working in tourism and hospitality were in the most demanding situation, with some claiming losses of up to half of their annual income in 2020. Women's enterprises in education, trade, and personal services anticipated losing

one-third of their annual revenues in 2020. Additionally, female entrepreneurs in industry, handicrafts, healthcare, and social services also expected a 25% decrease in their revenues. For many of these women, the reduction in business income threatened their families' livelihoods.

Women faced multiple challenges during the months of the pandemic. Female entrepreneurs dealt with difficulties caused by the virus on both economic and family fronts during the closure period. Balancing entrepreneurial activities with private and family responsibilities is a complex management task even in normal times. This situation was exacerbated by restriction measures, the introduction of distance learning, and increased caregiving responsibilities.⁵³ Female entrepreneurs with children under 7 years old were seven times more likely to reduce their business-related activities to prioritize caring for their children and other family members.¹⁹ Globally, women faced increased domestic burdens following the closure of educational and healthcare institutions.⁴² The reconciliation of work and family life, just like before the pandemic, was a significant challenge for female entrepreneurs. Goldstein *et al.* provide sufficient global evidence of a motherhood penalty and childcare constraints to help explain gender inequalities in an entrepreneurship context.⁴² Despite this, women who run businesses have received significantly less attention from scientists and researchers, even though they have been challenged in numerous ways during the pandemic. As entrepreneurs and employers, they had to navigate the constraints of epidemiological measures and their economic impacts. Simultaneously, as women and mothers, they often bore the brunt of household and home care tasks, including helping children with their studies, preparing family meals, and caring for elderly relatives.

While progress had been made in advancing women's entrepreneurship in the EU before the crisis, the pandemic exacerbated existing challenges and exposed vulnerabilities in the ecosystem.^{54,55} Key findings from this literature review indicate that women entrepreneurs experienced disproportionate economic losses, increased work-life balance challenges, and reduced access to finance compared to their male counterparts. The pandemic particularly affected women-dominated sectors, leading to business closures and job losses. Despite these challenges, the crisis also presented opportunities for digital transformation and the exploration of new market niches. However, the ability of women entrepreneurs to capitalize on these opportunities was often hindered by factors such as limited access to digital skills, financial resources, and support networks.

In the past decade, female entrepreneurship has developed as a key part of economic growth. Evidence shows that female entrepreneurship models can greatly foster resilience during crises.⁴⁵ According to Birsan *et al.*, female entrepreneurship models are characterized by adaptability, innovation, and sustainability, which are particularly vital in navigating pandemic-related challenges. These models often emphasize leveraging local resources, fostering community-oriented initiatives, and prioritizing flexible business structures. Such approaches not only address immediate crises but also build long-term resilience and sustainability in business operations.

The policy responses and support measures implemented at both the EU and national levels were critical in easing the pandemic's effects. While some initiatives proved successful, more targeted and continuous support is necessary to address the particular challenges faced by women entrepreneurs. The long-term impact of the pandemic on women's entrepreneurship in the EU remains complex and unclear. There is a risk of expanding gender gaps, rising debt burdens, and loss of human capital. Nonetheless, the crisis could also give rise to a new generation of resilient and adaptable women entrepreneurs. To fully understand the long-term implications, further research is needed, particularly in the areas of intersectionality, policy evaluation, and the impact on specific sectors. By addressing research gaps and investing in targeted support measures, policymakers and stakeholders can contribute to building a more inclusive and equitable entrepreneurial ecosystem for women in the EU.

The COVID-19 pandemic has provided invaluable insights into the challenges and resilience of women entrepreneurs in the EU. Key lessons learned highlight the vulnerability of women-owned businesses, which often operate in more vulnerable sectors with smaller business sizes and less financial cushion. Women entrepreneurs are disproportionately affected by economic downturns and crises, underscoring the need for targeted support. One significant lesson is the importance of digital transformation. The pandemic emphasized that digital skills are crucial for business survival and growth. Investing in digital infrastructure and training for women entrepreneurs is essential to ensure their future success in an increasingly digital economy.

Another critical area is the need for flexible and inclusive policies. Policies should be crafted with a focus on women entrepreneurs, addressing their unique needs and challenges. Support measures need to be accessible, timely, and tailored to various business stages and sectors to be effective. Additionally, work-life balance is crucial for the success of women entrepreneurs, making it essential to support them in managing both work and caregiving responsibilities. Investments in childcare and flexible work arrangements can significantly impact women's economic participation and entrepreneurial success.

At the policy level, women entrepreneurs might be more sensitive to pandemic-related crises. Without proper attention or effective recovery strategies, existing gender-based well-being differences are likely to intensify. Policymakers should consider implementing supportive infrastructures, such as egalitarian entrepreneurial ecosystems, to help both women and men entrepreneurs balance work and family responsibilities during times of crisis.⁸

From a practical perspective, this review highlights the need for flexible work arrangements, societal support, and government benefits, such as childcare subsidies, especially when remote work becomes the standard. Additionally, promoting gender equality benefits not only women entrepreneurs but all women, especially mothers, who are particularly vulnerable in times of crisis. Enhancing the business climate, career opportunities, parental leave, and anti-harassment policies can significantly improve women's overall well-being.

Support networks have proven to be powerful assets for women entrepreneurs. Mentorship, networking, and peer support are vital for their growth and resilience. Building strong support networks can help women overcome challenges and access necessary resources. A long-term perspective is essential when considering the impact of crises on women entrepreneurs. The effects are often enduring, and sustainable support and recovery strategies are necessary to rebuild and strengthen women-owned businesses.

Finally, data-driven policymaking is essential for understanding the needs of women entrepreneurs and crafting effective policies. Gathering and analyzing data on women entrepreneurs, as well as regularly monitoring and evaluating policies, are critical for assessing their impact and making necessary adjustments. These insights emphasize the importance of targeted support and comprehensive strategies to foster a more inclusive and equitable entrepreneurial ecosystem for women in the EU.

■ Conclusion

The landscape of women entrepreneurship in Europe before the COVID-19 pandemic showcased significant progress in certain areas, yet persistent challenges remained. The situation varied significantly among EU member states, with Nordic countries generally having higher rates of women entrepreneurship and more robust support systems compared to Southern European countries. Countries with stronger social safety nets and higher gender egalitarianism tended to experience less severe impacts on women entrepreneurs during the pandemic. When women are empowered socioeconomically (through education and financial means), institutionally (via governmental support and key rights), and culturally (through equality-focused attitudes and norms), they are better positioned to access the resources and support needed to overcome resource drainage.⁸ This empowerment also enables women entrepreneurs to more effectively balance work and family responsibilities, mitigating the negative impacts of crises such as the pandemic.

The economic consequences of the COVID-19 pandemic were particularly devastating for women entrepreneurs, emphasizing the fragility of women-owned businesses and the urgent need for targeted support measures. The ability of women entrepreneurs to seize opportunities during the pandemic was uneven across the EU, with better outcomes observed in countries possessing superior digital infrastructure and supportive policy environments. Despite the potential for new opportunities, such as digital transformation and emerging markets, many women entrepreneurs lack the necessary resources and support to fully take advantage of them. Key findings from before and during the pandemic reveal that women entrepreneurs experience greater economic losses, more significant work-life balance challenges, and limited access to financing compared to men. Women-dominated sectors were particularly hard hit, resulting in widespread business closures and job losses.

Despite the challenges, both EU and national-level policy responses and support measures were vital in reducing the pandemic's impact. Although some initiatives were successful, there is a clear need for more extensive and targeted support to

address the specific difficulties faced by women entrepreneurs. The long-term consequences of the pandemic on female entrepreneurship remain complex and uncertain, with potential risks including widening gender gaps, increased debt burdens, and loss of human capital. However, the crisis also has the potential to foster a new generation of resilient and adaptable women entrepreneurs.

To fully understand and address these long-term effects, further research is needed, particularly focusing on intersectionality, policy evaluation, and sector-specific impacts. By closing these research gaps and investing in targeted support, policymakers and stakeholders can foster a more inclusive and equitable entrepreneurial ecosystem for women in the EU. Addressing these challenges is essential for fostering women-led economic growth and building a more resilient, inclusive, and equitable economy.

■ Limitations

This literature review on the impact of the COVID-19 pandemic on women entrepreneurs in the EU has limitations, as it only considered open-access articles written in English.

Several research gaps persist, including the scarcity of long-term studies tracking the effects on women entrepreneurs. Additional research is needed to understand the specific challenges faced by women entrepreneurs from diverse socio-economic, ethnic, and racial backgrounds. Cross-country comparisons through comparative studies that examine the experiences of women entrepreneurs across different EU member states could offer valuable insights into best practices and policy implications.

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■ Author

Maria Eleni Tsiopoulou is a 10th-grade student on a full scholarship at Mandoulides High School in Thessaloniki, Greece. While her primary research interests focus on advancements and innovations within STEM fields, she is also actively involved in promoting young women's participation in STEM. She took the opportunity to expand her expertise into the realm of women's entrepreneurship, exploring its intersection with gender and empowerment.