

# Access to Public Grants During the Covid-19 Pandemic: What Are the Differences Between Women and Men Entrepreneurs?



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**Abstract** This study seeks to analyse whether and how Italian men and women entrepreneurs have accessed public grants to deal with the consequences of the Covid-19 pandemic. Namely, it aims to investigate whether there are significant differences among men and women entrepreneurs in terms of: (a) whether they applied for a grant; (b) the amount requested; (c) the type of grant requested. A sample of 239 (128 men and 111 women) sole-proprietors and owners of micro-enterprises located in the Marche region (Central Italy) was selected. Data about public grants requested, the amount and the type were collected by consulting Atoka, a Cerved database. Descriptive statistics have been used to analyse results and check whether statistically significant differences between men and women entrepreneurs emerge. A comparative analysis among men and women could be useful to better understand whether and how gender still influences access to finance and, consequently, the path of women entrepreneurs and the development of their businesses (especially during the economic crisis). Prior studies have suggested a positive impact of grants on small businesses' development, particularly those aimed at women entrepreneurs. We believe it is particularly important to understand whether women entrepreneurs have successfully applied for grants and whether their behaviours can be considered aligned with that of their male colleagues.

**Keywords** Women entrepreneurs · Public grants · Economic crisis · Covid-19 pandemic

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## 1 Introduction

The Covid-19 pandemic has dramatically affected global economic activity. In an attempt to slow the spread of the coronavirus pandemic, governments around the world have introduced strict limitations. The business activity of many companies has been severely disrupted due to the global business shutdown that caused a severe liquidity crunch and an unprecedented adverse impact on most economic industries, especially on small enterprises (Core and De Marco 2021; ECB 2020). Furthermore, women entrepreneurs have been more affected by the crisis than men (GEM 2021). Italy is one of the countries most severely affected by the negative consequences of the pandemic and the impact on small businesses and, in particular, women-led enterprises, which has been detrimental (Istat 2021; Unioncamere 2020a). To stem this adversity, grants for entrepreneurs were made available by governments to support companies and favour their survival.

Recent studies have shown that these measures, in the form of small public grants, can be beneficial, particularly for women entrepreneurs, as they increase bank lending and have a positive impact on turnover, value-added, capital, employment and productivity (Srhoj et al. 2021). However, prior research has underlined that women apply for fewer loans than men (Garwe and Fatoki 2012; Robb and Walken 2002), they are less likely than men to raise capital from external sources (Guzman and Kacperczyk 2019; Fairlie and Robb 2009), are more likely than men to use personal loans (Coleman and Robb 2009) and are more cautious than men in accessing finance during financial crises (Cesaroni and Sentuti 2016).

Starting from this scenario, this study aims to investigate what happened in Italy with regard to the demand for public grants to deal with the consequences of the Covid-19 pandemic. Namely, this research analyses whether and how Italian men and women entrepreneurs have accessed public grants. Moreover, it seeks to explore possible gender differences among men and women entrepreneurs in terms of: (a) whether they applied for a grant; (b) the amount requested; (c) the type of grant requested.

To accomplish the research's objective, a sample of 239 (128 men and 111 women) sole-proprietors, owners of micro-enterprises located in the Marche region (Central Italy) was selected. Data about public grants requested, the amount and the type were collected by consulting Atoka, a Cerved database. Descriptive statistics were used to analyse results and check whether statistically significant differences between men and women entrepreneurs emerge.

According to the findings, more than two out of three enterprises (67.4%) have made use of one or more support measures provided by the Italian Government. Women entrepreneurs have made greater use of these measures than their male colleagues, and some important differences between women and men entrepreneurs' access to public funds have emerged.

This paper contributes to the broad debate on access to finance by women entrepreneurs (Giglio 2021) by offering a preliminary investigation on women entrepreneurs' access to the public grants provided by the Italian government to

support small enterprises. It highlights some interesting differences between women-led and men-led enterprises, which can be the subject of further research.

The remainder of this paper is organised as follows. Section 2 presents the literature background. Section 3 describes the research methodology, while Sect. 4 illustrates the main findings of the research. The last section is devoted to presenting the discussion of the results and the main conclusions.

## 2 Literature Background

According to prior research, men and women entrepreneurs reveal significant differences in access to finance (Cesaroni and Sentuti 2016; Coleman and Robb 2009; Constantinidis et al. 2006; Fairlie and Robb 2009; Robb and Walken 2002). Namely, women entrepreneurs start their business with a lower level of funding than men entrepreneurs (Alsos et al. 2006), mainly due to their lower chance of raising capital from external sources (Constantinidis et al. 2006; Fairlie and Robb 2009; Robb and Walken 2002). Women are more likely than men to use personal loans—from family and friends—and this propensity persists even in the later stages of the business (Coleman and Robb 2009) to the extent that demand for debt finance is generally lower for women entrepreneurs than for their male counterparts (Croson and Gneezy 2009; Huang and Kisgen 2013).

Differences in demand for debt finance may result from a combination of supply-, demand- and structural-related factors (Cesaroni and Sentuti 2016; Singh and Dash 2021).

Supply-related factors refer to possible banks' discriminatory behaviours. Prior research has found that women entrepreneurs are less likely than their male counterparts to get bank loans (Heidrick and Nicol 2002; Muravyev et al. 2009), to have to pay higher interest rates (Muravyev et al. 2009; Alesina et al. 2013) and to provide higher collateral (Bellucci et al. 2010; Calcagnini et al. 2015). However, other research has not found any gender-based discrimination in accessing finance by women-led businesses (Borghans et al. 2009; Carter et al. 2007; Robb and Walken 2002) or even that they face lower discrimination than men-led businesses (Asiedu et al. 2012; Hansen and Rand 2014). Thus, results about supply-related factors are not unequivocal (Singh and Dash 2021), and, in any case, these factors are, in general, not under entrepreneurs' control (Bellucci et al. 2010; Carter et al. 2007; Foss et al. 2019).

Demand-related factors suggest that gender differences in accessing finance are the result of women entrepreneurs' personal choices, characteristics and motivations. Women entrepreneurs have a lower propensity towards debts (Cesaroni and Sentuti 2016; Morris et al. 2006) and are more likely to use individual funds, informal borrowings and family loans to finance their businesses (Coleman and Robb 2009; Treichel and Scott 2006). Several authors found an explanation for these differences in women entrepreneurs' greater risk aversion towards debts (Block et al. 2015; Byrnes et al. 1999; Croson and Gneezy 2009) or lack of financial literacy (Coleman

2002). Furthermore, men are more capable of negotiating than women (Babcock et al. 2003). Moreover, women entrepreneurs are, on average, younger with a shorter banking history and fewer business experiences than men, and these characteristics can also negatively affect access to credit (Shaw et al. 2001). Finally, according to some authors, women entrepreneurs suffer from ‘preventive fear’; they are discouraged from applying for funding because they expect their applications have little chance of being accepted (Ongena and Popov 2013; Robb and Walken 2002; Sena et al. 2012).

Structural-related factors explain women entrepreneurs’ lower access to finance by differences between women-led and men-led businesses, with particular regard to industry, size and age. Women-led businesses are, on average, typically younger and smaller than men-led firms and primarily operate in retail trade and service industries (GEM 2021). Consequently, they have less debt because, on average, they require lower financial resources with respect to older, bigger and industrial firms (Sabarwal and Terrell 2008).

These multiple perspectives have not produced unequivocal results and leave room for future research avenues (Cesaroni and Sentuti 2016; Giglio 2021). Moreover, the adverse impact triggered by the Covid-19 pandemic on industries and especially on small businesses has aroused new interest in this subject. Governments worldwide provided public funds to help the real economy through fiscal measures, direct grants and mainly public guarantees on private credit. Some authors have underlined that it is crucial to understand whether the existence of any ‘frictions’ can distort the allocation of public funds (Core and De Marco 2021: 2). Prior research and empirical evidence suggest that differences between men and women entrepreneurs may have occurred in access to public funds made available by governments to support businesses. The topic is particularly relevant, but there is still very little empirical research on the subject, especially with regard to the current economic situation.

Previous research has shown that such measures, even if small in amount, are particularly useful during recession times, especially for women entrepreneurs. Srhoj et al. (2021) investigated the effect of small public grants for women entrepreneurs provided by the government during the financial crisis in 2008. They proved that the consequences were not only positive but manifold. ‘Grants were used for childcare and business consultancy costs to alleviate time and information constraints of women entrepreneurs. Benefiting from these grants resulted in higher bank loans. The women entrepreneurs, on average, invested more money in capital and had better performance measures like turnover and value-added. The effect was particularly evident among more experienced women entrepreneurs’ (Srhoj et al. 2021: 1). Core and De Marco (2021) investigated whether banks can efficiently allocate public funds during a crisis. They analysed the Italian public guarantee scheme during Covid-19 and found two key bank characteristics that facilitated loan disbursement: size and information technology. These factors have been considered important because of the high volume of online applications and low-interest margins on guaranteed loans. ‘Pre-existing relationships matter for the allocation of guaranteed credit, as banks lend more in their core markets and where they have a larger share of

branches' (Core and De Marco 2021: 1). The gender of business owners has not been investigated. Nonetheless, Hewa-Wellalage et al. (2021) analysed the dynamics of debt and equity financing during the Covid-19 pandemic. By analysing a cross-country sample of 8921 private firms, they challenge the assumption of 'gender-based discrimination' in the debt market. According to their results, a slight gender bias in debt financing emerged, but only because creditors favoured women entrepreneurs when dealing with cash flow problems during the Covid-19 pandemic. Moreover, no evidence of gender bias in equity financing emerged. Consequently, in a highly uncertain context, women entrepreneurs seem to be considered more advantageous by financial institutions which seek to hedge their risk by favouring more conservative and risk-averse subjects.

In summary, gender matters in accessing finance and prior research has led us to suppose that access to public grants is not excluded. For that reason, this study seeks to analyse whether and how Italian men and women entrepreneurs have accessed public grants to deal with the consequences of the Covid-19 pandemic and to investigate whether there are any significant differences among men and women entrepreneurs exist in terms of applications, amount and type of grant requested.

### 3 Methodology

In order to achieve our research goals, a quantitative analysis was carried out through data collection from a sample of Italian sole-proprietors and owners of micro-enterprises located in the Marche Region (Central Italy) observed during the Covid-19 outbreak (2020 and 2021). The sample, composed of 300 local firms affiliated with the National Confederation of Craftsmanship and Small Medium Enterprises (CNA), was drawn from a prior study on the gender gap as regards access to credit during the financial crisis 2008–2012 (Cesaroni and Sentuti 2015). Recommendation 2003/361/EC has been used to define micro-enterprises.

We decided to focus on micro-enterprises because they represent the majority of companies in Italy and worldwide and have been the most affected by the crisis due to Covid-19 (Istat 2021; Core and De Marco 2021; Unioncamere 2020a). Moreover, 'Smaller firms are more likely to face liquidity restraints than larger firms. If these liquidity restraints are the result of a market breakdown [...] government assistance programs to small businesses could rectify these' (Evans and Leighton 1990: 328).

The Marche Region has one of the highest concentrations of micro and small enterprises in Italy, about 79% (Istat 2019). The impact of the Covid-19 crisis has been particularly harsh. In 2020, the regional GDP declined by 8.8% (OMRL 2021), the company mortality rate was higher than the national data (4.64% vs. 4.49%) and the same indicator for the artisan enterprises was 6.42% and 6.11% respectively (Infocamere Dashboard 2020). With respect to entrepreneur gender, the regional feminisation rate (23.0%) is slightly higher than the national percentage of women-owned businesses (21.9%). Moreover, even in this region, women-owned enterprises have been badly hit by the Covid-19 crisis: the balance of firms was negative

(−473 units), corresponding to a percentage variation of −1.22 compared to 2019, a figure markedly higher than the average national annual variation of −0.29% (Unioncamere 2020b). For all these reasons, the Marche Region appears particularly suited to such a study.

The data were collected from the Atoka database (Cerved database, which provides data on over six million Italian enterprises by leveraging Big Data and semantic web technologies). It served to verify whether the enterprises investigated in previous study were still active or otherwise, whether they applied for a grant during the Covid-19 crisis, the amount requested/obtained and the type of grant requested. Furthermore, we also gathered data about how many times firms were forced by government measures to stay closed. The Atoka data concerning public grants come from the National Register of State Aid. Data concerning industry and firm age were extracted from the CNA database made available during the prior study (Cesaroni and Sentuti 2015).

Starting with a sample of 300 enterprises (150 women and 150 men) analysed in 2013,<sup>1</sup> as a first step, we verified whether all these enterprises were still active or not; only 52% (156 out of 300, 82 women and 74 men) of them survived. Second, by drawing on the CNA local affiliates list previously analysed, we replaced the inactive firms (144 units) with active ones by following two criteria: the sector they belong to and the year they were established. This choice is justified by the need to recreate a representative sample of the local CNA context studied in the financial crisis. Both conditions allowed us to retrieve 93 firms; for the remaining 51 enterprises, it was not possible because they failed to meet the required conditions. The final sample was composed of 249 Italian sole-proprietors of micro-enterprises (115 women and 134 men) active in the Marche Region during the Covid-19 outbreak.

Descriptive statistics and independent T-test samples were used to analyse data and check whether statistically significant differences emerged between men and women entrepreneurs. From a methodological point of view, before running the t-test for independent samples, the outliers were identified and excluded in order to limit the potential bias in the results of the T-test; after discarding firms with outliers, the sample size was reduced to 239, 111 women and 128 men.

## 4 Findings

Table 1 shows the sample's characteristics, while Table 2 offers a more detailed description of the sample distribution by sector. The data display a slightly higher incidence of male-owned firms than women-owned ones. Regardless of gender,

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<sup>1</sup>In the prior study a non-proportional stratified sample with 300 sole-proprietors and the same number of men and women entrepreneurs (150 M and 150 W) was selected using the list of members from the local CNA, one of the main regional business associations. Starting from a list of 1627 sole-proprietors (429 W and 1198 M) a statistically representative sample of the population affiliated to the CNA was randomly extracted.

**Table 1** Sample description

	All firms		Men-owned firms		Women-owned firms	
	N	%	N	%	N	%
Sample	239		128	53.6	111	46.4
Firm age	28.9		29.1		28.6	
Industry:						
Manufacturing	74	31.0	40	31.3	34	30.6
Trade and service	165	69.0	88	68.8	77	69.4

Source: Authors

**Table 2** Distribution by sector

Sector	Men-owned firms		Women-owned firms	
	N	%	N	%
Arts	2	1.6	2	1.8
Community services	9	7.0	12	10.8
Communications	3	2.3	2	1.8
Constructions	41	32.0	0	0.0
Fashion	2	1.6	13	11.7
Food	8	6.3	16	14.4
Installation	17	13.3	0	0.0
Manufacturing	13	10.2	5	4.5
Transports	23	18.0	2	1.8
Wellness and health	8	6.3	56	50.5
Others	2	1.6	3	2.7
Total	128	100	111	100

Source: Authors

most enterprises operate in the trade and service sector, the rest belonging to the manufacturing industry and the average age of the firm is about 29 years.

By analysing the data obtained from the Atoka database, three types of state aid were identified, classifiable as support measures provided by the Italian Government to enable firms to contain and overcome the damage caused by the health emergency:

- *Public credit guarantees* announced in the decree-law (d.l.) n.18, 17 March 2020, and the d.l. n. 23, 8 April 2020 (the so-called *DL Liquidità*), regarding the urgent measures affecting credit access, granted by the Mezzogiorno MedioCredito Central Bank.
- *Tax benefits and exemptions* introduced by the d.l. n. 34/2020 (converted into law, 17 July 2020, n. 77) regarding the provisions for the regional tax on productive activities (IRAP) granted by the Agenzia delle Entrate (Revenue Agency). This measure is not a real financing, but it is nevertheless a measure taken to defend business liquidity; therefore, we have decided to maintain the analysis of this form of grant as well.

**Table 3** Frequency of use of public grants (2020–2021)

	Full sample		Men-owned firms		Women-owned firms	
	N	%	N	%	N	%
Any type	78	32.6	54	42.2	24	21.7
One type	99	41.5	44	34.4	55	49.5
More than one	62	25.9	30	23.4	32	28.8
Total	239	100	128	100	111	100

Source: Authors

**Table 4** Commercial activity closure frequency (2020–2021)

	Year 2020						Year 2021					
	Full sample		Men-owned firms		Women-owned firms		Full sample		Men-owned firms		Women-owned firms	
	N	%	N	%	N	%	N	%	N	%	N	%
Never	67	28.3	54	42.9	13	11.7	204	86.1	118	93.7	86	77.5
Once	6	2.5	4	3.2	2	1.8	0	0.0	0	0.0	0	0
More than once	164	69.2	68	54.0	96	86.5	33	13.9	8	6.3	25	22.5
Total	237	100	126	100	111	100	237	100	126	100	111	100

Source: Authors

- *Subsidies* provided by the d.l. n. 34, 19 May 2020, and d.l. n. 104, 14 August 2020, given by the Marche Region.

During the pandemic crisis, women-owned firms made greater use of the various support measures made available by the Italian Government (Table 3). 41.5% of the firms analysed resorted to at least ‘one type’ of public grants—49.5% of the women-owned enterprises and 34.4% of their male counterparts. Similar differences emerged among firms that used ‘more than one’ measure—28.8% and 23.4%, respectively. In keeping with these findings, only 21.7% of women-owned enterprises failed to benefit from ‘any type’ of support, compared to 42.2% of men-owned ones.

Table 4 shows how many times firms were forced by government intervention to stay closed. Overall, there were 25 decrees issued by the President of the Council of Ministers (DPCM), between 2020 and 2021, suspending all commercial activities nationwide in a bid to curb the spread of the pandemic. In the first year of Covid (2020), 69.2% of the firms examined had to close up shop as a result of these decrees, and this ruling appears to have hit women-owned firms (86.5%) harder than their male counterparts (54%). Government intervention eased off during 2021 to the point that only 14% of the overall sample were affected by closures more than once. However, it was always the women entrepreneurs who bore the brunt of the constraints (22.5% compared to 6.3% of male-owned firms).

The results of the t-test (Table 5) show the statistical significance of differences between men- and women-owned enterprises concerning access to public grants



**Table 5** Public grants: women-owned vs. men-owned firms (values in euro)

Variables		All firms	Men-owned firms	Women-owned firms	Means differences
		€	€	€	€
Total amount	Mean	10,350.40	12,658.55	8,364.31	4,294.24 <sup>a</sup>
	<i>SD</i>	12,264.29	13,658.14	10,607.66	
	<i>N</i>	161	74 (45.9%)	87 (54%)	
Tax benefits and exemptions	Mean	728.06	937.08	397.13	539.95
	<i>SD</i>	1,457.50	1,797.42	500.34	
	<i>N</i>	62	38 (61.3%)	24 (38.7%)	
Subsidies	Mean	1,351.73	1,201.93	1,418.03	-216.1 <sup>a</sup>
	<i>SD</i>	382.02	489.606	305.237	
	<i>N</i>	88	27 (30.7%)	61 (69.3%)	
Public credit guarantees	Mean	18,194.78	19,742.55	16,402.63	3,339.92
	<i>SD</i>	11,868.23	12,830.15	10,531.07	
	<i>N</i>	82	44 (53.7%)	38 (46.3%)	

Source: Authors

<sup>a</sup> Indicates significance at the 5% level

made available by the Central Government. Taking into account the ‘Total amount’ of benefits obtained (calculated as the sum of three types of grants), women-owned enterprises obtained—on average—a smaller volume of economic support (€8,364) than their male counterparts (€12,658), and this difference is statistically significant. Nonetheless, it was the women entrepreneurs who made greater use of the support measures provided during the pandemic period (54%).

Looking at single kinds of public grants, interesting differences emerged. Regarding ‘Tax benefits and exemptions’, women-owned firms obtained a smaller amount of resources (€397.13) than men-owned ones (€937.08), but this difference is not statistically significant. The same evidence emerged in terms of ‘Public credit guarantees’: women entrepreneurs received less support in obtaining credit access (€16,402) than their male counterparts (€19,742), but also in this case the difference is not statistically significant. However, an opposite trend appeared as regards ‘Subsidies’: women-owned firms benefited more (€1,418) than their colleagues (€1,201), and the difference is statistically significant.

## 5 Discussion and Conclusions

This paper has investigated entrepreneurs' access to public grants provided by the Italian Government in response to the Covid-19 pandemic. Specifically, it has explored possible gender differences among a sample of Italian men and women micro-entrepreneurs in terms of: (a) whether they applied for a grant; (b) the amount requested; (c) the type of grant requested.

The findings show that more than two out of three companies (67.4%) have made use of one or more support measures provided by the Italian Government. Women entrepreneurs have made greater use of these measures than their male colleagues; 78.3% of women entrepreneurs resorted to one or more types of public grants compared to 57.8% of men. However, taking into account the 'Total amount' of benefits obtained, women-owned enterprises have obtained—on average—a smaller volume of economic support than their male counterparts, and this difference is statistically significant. At first glance, it would seem possible to conclude that women asked for more and got less. Nonetheless, looking at single kinds of public grants, the issue becomes more complex. Women-owned firms obtained, on average, a smaller amount of resources than men-owned ones regarding 'Tax benefits and exemptions' and 'Public credit guarantees', but these differences are not statistically significant. Conversely, as regards 'Subsidies', on average, women-owned firms benefited more than their colleagues, and the difference is statistically significant. Therefore, while the data seems to confirm the presence of a gender gap in accessing public grants, in some ways, women entrepreneurs seem to have benefited more than men from some measures.

Having verified the existence of these differences, the real question is to understand the reasons why. Which factors between supply-, demand- and structural-related (Cesaroni and Sentuti 2016; Giglio 2021) influenced these differences most? Is it really a gender issue, or can other factors explain them? Naturally, the type of analysis carried out did not allow us to verify these aspects in depth. Investigating the determining factors will be the second step of the research. However, in light of the literature, some considerations can be advanced.

With regard to supply-related factors, the role of banks, in this case, is partially bound by the regulations. However, it is true that—as previous studies have shown (Core and De Marco 2021)—some factors may influence how banks efficiently allocate public funds during a crisis. Therefore, it would be appropriate to investigate this further. Concerning demand-related factors, our results seem to contradict previous research regarding women entrepreneurs' 'preventive fear', which discourages them from applying for funding because they expect their applications have little chance of being accepted (Ongena and Popov 2013; Robb and Walken 2002; Sena et al. 2012). Our study has shown that, on the contrary, women entrepreneurs applied for public grants more frequently than men. Last but not least, structural-related factors should be considered. We believe they could have a particularly strong role in explaining differences in access to public finance between women-led and men-led businesses. Apart from the size, which in our sample is the same for

all enterprises, and business age, which we believe could be less important in this context, belonging to a specific sector may certainly have influenced the need for or possibility to access or not specific measures. We should remember, for example, that not all activities were forced by government intervention to stay closed for the same period. As shown by the results, women-led businesses were forced to close up shop more often than men. Moreover, they suffered most from the pandemic (Unioncamere 2021), and this could explain, at least in part, their greater application for support measures and their greater benefit from ‘Subsidies’.

This paper contributes to the broad debate on women entrepreneurs’ access to finance. Many papers have focused on this topic (Giglio 2021) and also consider the role of public grants in helping women to overcome financial crises (Srhoj et al. 2021). Few have examined the current situation generated by Covid-19 (Bassani and Sentuti 2021) with regard to the Italian context (Core and De Marco 2021), and, to the best of our knowledge, no one has focused on the gender issue. We have proposed a preliminary analysis of women entrepreneurs’ access to the measures granted by the Italian Government to support small enterprises and highlight some interesting differences between women-led and men-led enterprises, which can be the subject of further research.

This study has some limitations. First, we considered only sole-proprietor and micro-enterprises located in a specific and restricted geographical area, the Marche Region, and this influenced our results and limited their generalisation. A wider national study would be desirable, including different legal forms and comparing men- and women-owned firms’ access to public grants during the pandemic crisis. Second, the differences between men and women entrepreneurs have been investigated while overlooking other relevant variables such as personal characteristics (entrepreneur’s age, education level, financial literacy, etc.), loan characteristics (costs, loan size, guarantees and collaterals) and firms’ characteristics (e.g. age and sector). Indeed, these variables could influence access to credit and/or public grants and, therefore, should be applied in future research. Third, our research was restricted merely to the differences between Italian men and women entrepreneurs in access to public grants. The next stage of this study will focus on analysing the reasons for this gender diversity, particularly during downturn periods. In fact, despite many studies and empirical investigations, reasons for gender differences within financial patterns are still unclear and require further investigation.

## References

- Alesina A, Lotti F, Mistrulli P E (2013) Do Women Pay More for Credit? Evidence from Italy. *Journal of the European Economic Association*, 11(1): 45-66. DOI: <https://doi.org/10.1111/j.1542-4774.2012.01100.x>
- Alsos G A, Isaksen E J, Ljunggren E (2006) New Venture Financing and Subsequent Business Growth in Men- and Women-Led Businesses. *Entrepreneurship Theory and Practice*, 30(5), 667-686. DOI: <https://doi.org/10.1111/j.1540-6520.2006.00141.x>

- Asiedu E, Freeman J, Nti-Adde A (2012) Access to credit by small businesses: how relevant are race, ethnicity and gender?. *American Economic Review* 102: 532-537. Available online at <https://www.aeaweb.org/articles?id=10.1257/aer.102.3.532>.
- Babcock L, Laschever S, Gelfand M, Small D (2003) Nice girls don't ask. *Harvard Business Review*, 81(10): 14-14.
- Bassani G, Sentuti A (2021) An overview of the early research on Covid-19 and SMEs. *Proceedings of the Piccola Impresa/Small Business 5<sup>th</sup> Workshop "Beyond the Crisis: What Is the Future for Small Businesses?"*, 275-294. Available online at <https://journals.uniurb.it/index.php/piccola/article/download/3362/2961#page=277>
- Bellucci A, Borisov A, Zazzaro A (2010) Does Gender Matter in Bank-Firm Relationships? Evidence from Small Business Lending. *Journal of Banking & Finance*, 34(12): 2968-2984. DOI: <https://doi.org/10.1016/j.jbankfin.2010.07.008>.
- Block J, Sandner P, Spiegel F (2015) How do risk attitudes differ within the group of entrepreneurs? The role of motivation and procedural utility. *Journal of Small Business Management*, 53(1): 183–206. DOI: <https://doi.org/10.1111/jsbm.12060>.
- Borghans L, Golsteyn B H H, Heckman J J, Meijers H (2009) Gender differences in risk aversion and ambiguity aversion. *Journal of the European Economic Association*, 7(2-3): 649-658. DOI: <https://doi.org/10.1162/JEEA.2009.7.2-3.649>.
- Byrnes J P, Miller D C, Schafer W D (1999) Gender Differences in Risk Taking: A Meta-Analysis. *Psychological Bulletin*, 125(3): 367-383. <https://doi.org/10.1037/0033-2909.125.3.367>
- Calcagnini G, Giombini G, Lenti E (2015) Imprese femminili e crisi economica. *Credito, competitività e conciliazione in una prospettiva di genere*, FrancoAngeli, Milano.
- Cesaroni F M, Sentuti A (2016) Economic crisis, women entrepreneurs and bank loans: some empirical evidence from Italy. *Economic research-Ekonomska istraživanja*, 29(1): 1050-1061.
- Coleman S (2002) Constraints Faced by Women Small Business Owners: Evidence from the Data. *Journal of Developmental Entrepreneurship*, 7(2): 151-174.
- Coleman S, Robb A (2009) A comparison of new firm financing by gender: evidence from the Kauffman Firm Survey Data. *Small Business Economics*, 33(4): 397-411. DOI: <https://doi.org/10.1007/s11187-009-9205-7>.
- Constantinidis C, Cornet A, Asandei S (2006) Financing of women-owned ventures: the impact of gender and other owner- and firm-related variables. *Venture Capital*, 8(2): 133-157. DOI: <https://doi.org/10.1080/13691060600572557>
- Core F, De Marco F (2021) Public Guarantees for Small Businesses in Italy During COVID-19. CEPR Discussion Paper No. DP15799. Available online at <https://ssrn.com/abstract=3604114>
- Crosen R, Gneezy U (2009) Gender Differences in Preferences. *Journal of Economic Literature*, 47(2): 448-474. DOI: <https://doi.org/10.1257/jel.47.2.448>
- ECB (2020) *Economic Bulletin*, Issue 4/2020. Available online at <https://www.ecb.europa.eu/pub/economic-bulletin/html/eb202004.en.html>.
- Evans D S, Leighton L S (1990) Small business formation by unemployed and employed workers. *Small Business Economics*, 2(4): 319-330.
- Fairlie R W, Robb A (2009) Gender differences in business performance: evidence from the characteristics of business owners survey. *Small Business Economics*, 33(4): 375-395. DOI: <https://doi.org/10.1007/s11187-009-9207-5>.
- 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(2): 409-429. DOI: <https://doi.org/10.1007/s11187-018-9993-8>.

- Garwe D K, Fatoki O (2012) The impact of gender on SME characteristics and access to debt finance in South Africa. *Development Southern Africa*, 29(3): 448-461. DOI: <https://doi.org/10.1080/0376835X.2012.706040>.
- GEM (2021) Global Entrepreneurship Monitor Global Report 2020/2021. Available online at: <https://gemconsortium.org/file/open?fileId=50691>.
- Giglio F (2021) Access to Credit and Women Entrepreneurs: A Systematic. *International Journal of Economics and Finance*, 13(10): 12-27. DOI: <https://doi.org/10.5539/ijef.v13n10p12>.
- Guzman J, Kacperczyk A O (2019) Gender gap in entrepreneurship. *Research Policy*, 48(7): 1666-1680. DOI: <https://doi.org/10.1016/j.respol.2019.03.012>.
- Hansen H, Rand J (2014) Estimates of gender differences in firm's access to credit in Sub-Saharan Africa. *Economics Letters*, 123(3): 374-377. DOI: <https://doi.org/10.1016/j.econlet.2014.04.001>.
- Heidrick T, Nicol T (2002) Financing SMEs in Canada: Barriers Faced by Women, Youth, Aboriginal and Minority Entrepreneurs in Accessing. SME Financing Data Initiative, Government of Canada.
- Hewa-Wellalage N, Boubaker S, Hunjra A I, Verhoeven P (2021) The gender gap in access to finance: Evidence from the COVID-19 pandemic. *Finance Research Letters*, <https://doi.org/10.1016/j.frl.2021.102329>.
- Huang J, Kisgen D J (2013) Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics*, 108(3): 822-839. DOI: <https://doi.org/10.1016/j.jfineco.2012.12.005>.
- Infocamere Dashboard (2020) Available online at <https://www.infocamere.it/movimprese>.
- Istat (2019) Imprese, censimenti permanenti. Report Marche. Available online at [https://www.istat.it/it/files/2021/03/CPUE\\_MARCHE.pdf](https://www.istat.it/it/files/2021/03/CPUE_MARCHE.pdf).
- Istat (2021) Rapporto sulle imprese 2021. Struttura, comportamenti e performance dal censimento permanente. DOI: <https://doi.org/10.1481/Istat.Rapportoimpresa.2021>.
- Morris M H, Miyasaki N N, Watters C E, Coombes S M (2006) The Dilemma of Growth: understanding Venture Size Choices of Women Entrepreneurs. *Journal of Small Business Management*, 44(2): 221-244. DOI: <https://doi.org/10.1111/j.1540-627X.2006.00165.x>.
- Muravyev A, Talavera O, Schaefer D (2009) Entrepreneurs' Gender and Financial Constraints: Evidence from International Data. *Journal of Comparative Economics*, 37(2): 270-286. DOI: <https://doi.org/10.1016/j.jce.2008.12.001>.
- OMRL (2021) Report annuale, Osservatorio Mercato del Lavoro della Regione Marche. Available online at [https://www.regione.marche.it/portals/0/Lavoro\\_Formazione\\_Professionale/Osservatorio%20Lavoro/REPORT%20ANNUALE%202021\\_.pdf](https://www.regione.marche.it/portals/0/Lavoro_Formazione_Professionale/Osservatorio%20Lavoro/REPORT%20ANNUALE%202021_.pdf).
- Ongena S R G, Popov A (2013) Take care of home and family, honey, and let me take care of the money. Gender bias and credit market barriers for female entrepreneurs (European Banking Center Discussion Paper, No. 2013-001). Available online at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2229194](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2229194).
- Robb A, Walken J D (2002) Firm, owner, and financing characteristics: Differences between female- and male-owned small businesses. Federal Reserve Working Paper 2002-18. <https://doi.org/10.2139/ssrn.306800>.
- Sabarwal S, Terrell K (2008) Does gender matter for firm performance? Evidence from Eastern Europe and Central Asia. Evidence from Eastern Europe and Central Asia (September 1, 2008). World Bank Policy Research Working Paper, (4705). Available online at <https://www.econstor.eu/bitstream/10419/35444/1/582915147.pdf>
- Sena V, Scott J, Roper S (2012). Gender, Borrowing Patterns and Self-Employment: some Evidence for England. *Small Business Economics*, 38(4): 467-480. DOI: <https://doi.org/10.1007/s11187-010-9272-9>.
- Singh S, Dash B M (2021) Gender Discrimination in Accessing Finance by Women-Owned Businesses: A Review. *Journal of International Women's Studies*, 22(9): 381-399. Available online at <https://vc.bridgew.edu/jiws/vol22/iss9/25>.

- Shaw E, Carter S L, Brierton J (2001) Unequal entrepreneurs: why female enterprise is an uphill business. The Work Foundation. Available online at <https://pureportal.strath.ac.uk/en/publications/unequal-entrepreneurs-why-female-enterprise-is-an-uphill-business>.
- Srhoj S, Škrinjarić B, Radas S, Walde J (2021) Small matching grants for women entrepreneurs: lessons from the past recession. *Small Business Economics*, <https://doi.org/10.1007/s11187-021-00524-2>.
- Treichel M Z, Scott J (2006) Women-owned businesses and access to bank credit: Evidence from three surveys since 1987. *Venture Capital*, 8(1): 51-67. DOI: <https://doi.org/10.1080/13691060500453726>
- Unioncamere (2020a) IV Rapporto sull'imprenditorialità Femminile. Imprese: una su 5 al femminile ma la pandemia ne ha bloccato la rincorsa. Archivio comunicati stampa. Available online at [https://www.unioncamere.gov.it/sites/default/files/articoli/202010/27072020\\_com\\_impresefemminili\\_Rapporto\\_doc\\_1.doc](https://www.unioncamere.gov.it/sites/default/files/articoli/202010/27072020_com_impresefemminili_Rapporto_doc_1.doc).
- Unioncamere (2020b) Il Covid interrompe la crescita di imprese femminili: a fine 2020 sono 4mila in meno rispetto al 2019. Archivio comunicati stampa. Available online at <https://www.imprenditoriafemminile.camcom.it/P43K491O0/dati.htm>.