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Conference Paper — Published Version

COVID-19 and Women in the Labour Market in the Federation of Bosnia and Herzegovina

Suggested Citation: Markuš, Ranko; Umihanić, Bahrija; Veselinović, Ljiljan (2021) : COVID-19 and Women in the Labour Market in the Federation of Bosnia and Herzegovina, In: Nuhanović, Amra Gaždo, Amra (Ed.): ICEI 2021, Economic Response and Crisis Recovery Caused by the Covid-19 Pandemic, Conference proceedings: 7th Scientific Conference with International Participation, Tuzla, December 2th-4th, 2021, Faculty of Economics, University of Tuzla, Tuzla, Bosnia and Herzegovina, pp. 260-267

This Version is available at:

<https://hdl.handle.net/10419/337871>

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Faculty of Economics**

ICEI

**7th Scientific Conference with International Participation
"ECONOMY OF INTEGRATION" ICEI 2021
ECONOMIC RESPONSE AND CRISIS RECOVERY CAUSED
BY THE COVID-19 PANDEMIC**

CONFERENCE PROCEEDINGS

Tuzla, December 2th-4th, 2021



7th Scientific Conference with International Participation
“ECONOMY OF INTEGRATION”

ICEI 2021

**Economic Response and Crisis Recovery Caused
by the Covid-19 Pandemic**

CONFERENCE PROCEEDINGS

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ICEI's 2015 Conference Proceedings

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ICEI's 2019 Conference Proceedings Indexed in: Conference Proceedings Citation Index
(CPCI), a Web of Science™ (WoS) Core Collection database

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Izdavač / Publisher:

Faculty of Economics, University of Tuzla, BiH

Za izdavača / For publisher:

Meldina Kokorovic Jukan, PhD, Dean

Urednici / Editors:

Amra Nuhanović, PhD

Amra Gadžo, PhD

Štampa / Printed by:

Off-Set, Tuzla, Bosnia and Herzegovina

Book of Abstracts is published with ISSN 2233-0445

ISSN 2490-2616

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7th Scientific Conference with International Participation
“ECONOMY OF INTEGRATION”

ICEI 2021

Economic Response and Crisis Recovery Caused
by the Covid-19 Pandemic



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COVID-19 AND WOMEN IN THE LABOUR MARKET IN THE FEDERATION OF BOSNIA AND HERZEGOVINA

COVID-19 I ŽENE NA TRŽIŠTU RADA U FEDERACIJI BOSNE I HERCEGOVINE

Abstract

In this paper, authors present the results of a research study on the representation of women in the labour market within fifteen activities in the Federation of Bosnia and Herzegovina. In four of the fifteen industries, women are more represented than men. Authors investigated the resilience of companies to the challenges of the COVID-19 pandemic using a large sample of 1,232 companies operating in the Federation of BiH and focusing on determining the success of companies measured by financial performance and reducing the number of women and men employed in companies. The results of the research indicate that 50.1% of companies in which women are more represented reported a decline in financial performance, compared to 38.6% of companies in which men are more represented, and that 4.1% of women lost their jobs compared to 2.6% of men. The results of this study could be valuable in promoting the need to establish various measures to combat the low participation of women in the labour market.

Keywords: COVID-19, labour market, women

JEL: J21

Sažetak

U radu prezentiramo rezultate studije istraživanja zastupljenosti žena na tržištu rada u okviru petnaest djelatnosti u Federaciji Bosne i Hercegovine. U četiri od petnaest djelatnosti žene su zastupljenije od muškaraca. Istražili smo otpornost kompanija na izazove pandemije COVID-19 koristeći se velikim uzorkom od 1.232 kompanije koje posluju u Federaciji BiH a fokusirajući se na utvrđivanje uspješnosti kompanija mjerene finansijskim performansama i smanjenjem broja zaposlenih žena i muškaraca u kompanijama. Rezultati naših istraživanja pokazuju da je 50,1% kompanija u kojima su zastupljenije žene prijavilo pad finansijskih performansi, u poređenju sa 38,6% kompanija u kojima su zastupljeniji muškarci, te da je 4,1% žena izgubilo posao naspram 2,6% muškaraca. Rezultati ove studije mogli bi biti vrijedni u promicanju potreba za osmišljavanjem različitih mjera za borbu protiv niskog učešća žena na tržištu rada.

Ključne riječi: COVID-19, tržište rada, žene

JEL: J21

1. Introduction

All labour market figures are showing that there is a significant gender gap: women are less active, fewer employees and more women are outside of the labour market. As of August 2021 (Labour and Employment Agency of Bosnia and Herzegovina, 2021), the number of employed persons in BiH was 818,459 out of which there were 354,360 women in August 2021. During the same month, the number of registered unemployed in BiH amounted to 392 551, out of which there were 226,537 women. In addition to that, 57.7% of the total number of job seekers were women. In the total number of persons outside the labour force, 578 thousand (38,1%) persons are men, and 939 thousand (61,9%) persons are women.

Out of those employed, women are highly present in sectors that have been considered vital throughout the pandemic – *i.e.*, education, healthcare, caregiving, cashiering, and retail. The paradox is that although women have been at the frontline of the pandemic, they have still lacked decision-making power, and are more exposed to insecure jobs (De Paz, Muller, Muñoz Boudet & Isis Gaddis, 2020, p. 14). Women are generally underrepresented in management positions in public enterprises of companies owned by the Federation of Bosnia and Herzegovina (Selimović *et al.*, 2021, p. 17). Women spend a lot of time on household chores that are not properly valued in society (MEASURE-BiH, 2019). The purpose of the research is aimed at assessing the representation of employed women in certain industries and the resilience of companies, measured by financial performance and the percentage of job losses, in which women are more represented in the challenges of the COVID-19 pandemic. The aim of this paper is to further understand the effects of COVID-19 on women employment across different sectors of economies, as “there are good reasons to be concerned about the impact of the pandemic on women’s jobs” (Queisser, 2021, p. 249). We examined whether women were more affected by the COVID-19 crisis in the Federation of Bosnia and Herzegovina. The data used in this research are data collected by the Federal Employment Agency as part of the labour market survey in the Federation of BiH 2020/2021. The random stratified sample consists of 1,232 employers registered in the Federation of BiH.

2. Literature Review

O'Donnell (1984) has summarized four major theoretical schools that explain the lower participation of female employees in particular industries, including neoclassical economists in the human capital school; dual labour market theorists; labour market segmentation theorists; and feminists who use the term 'reserve army'. Based on these theories, women might be under-represented because of making different kinds of labour market choices and their characteristics being major determinants of the labour market (neo-classical theorists); because women are secondary workers with most problems arising from the demand-side of the labour market (dual labour market theory); because market consists of many separate groups of employees resulting in segmentation of jobs according to different criteria (race, age and sex); or because married women constitute what is called “a reserve army of labour”. Klasen (2019) has noted that even though some positive trends are evident (strong expansion of female education and favourable economic conditions), the effect of these trends varies across countries and regions within countries. According to Klasen (2019), differences in levels of employment are affected by “historical differences in economic structure that circumscribe women’s economics opportunities still today.” Theory named “Feminization U theory” provides another explanation of what female labour participation varies, *i.e.* the “women’s labour force participation drops during the initial phase of industrialization and rises once a certain level of development is reached” (Roncolato, 2016, p. 1). Roncolato’s (2016) findings show a U-shaped relationship exists between the share of nonagricultural employment and women’s probability of being in the labour force, but it is not found between the share of households with electricity and women’s probability of being in the workforce.

The burden of COVID-19 falls disproportionately on women, older employees, migrants and workers with lower levels of education (Hogarth, 2021, p. 12). As noted by Queisser (2021), the COVID-19 pandemic differently affected men and women. As women represent two-thirds of the health workforce worldwide, they are at greater risk of infection, with the additional disadvantage of not participating in decision-making processes since they are typically under-represented in leadership.

Doley & Padhan (2021) concluded that the impact of COVID-19 on women's participation in the labour market in the North-eastern states are significant, indicating that women suffer more than men regarding layoffs. Analysis of effects by Gassen & Penje (2021) also found that some female-dominated sectors (health care or elderly care) experienced stable or even increased labour demand during the pandemic, with other sectors (hospitality, retail sectors) being harder hit by the COVID-19 pandemic as they employ more women than men. In addition to that difference by gender, women are more likely to work on a temporary contract, making this group in the labour market more vulnerable. Gassen & Penje (2021) also report that women are more likely to become inactive during the pandemic because of the need to take care of children or sick family members.

Some researchers found that, during 2020, women were more likely to increase their load of housework (Del Boca *et al.*, 2020, p. 1001), lose their jobs (Farré *et al.*, 2021, p.4), and reduce their working hours more than men did (Collins *et al.*, 2020, p. 110). The study from Germany (Hipp & Bünning, 2020, p. 670) shows that women with small children are particularly vulnerable. According to ILO Monitor the decline in employment in most countries has led to a substantial increase in inactivity. At the same time changes in unemployment for men and women are broadly similar, but women are more at risk of inactivity.

The government employed different measures to fight COVID-19 consequences, such as Ferreira (2021): reduction of workers' exposure to COVID-19 in the workplace, income support, helping firms to adjust working time and preserve jobs, financial support to the affected firms, and tackling the risk of credit defaults by households and business. However, as noted by Eichhorst, Marx & Rinne (2000), unemployment benefits' changes made because of COVID-19 varied across countries, with some countries being more generous than others. As different measures have been implemented across countries, studies that address the problem of female labour participation might be valuable in promoting the need to design different measures to fight low women labour market participation.

3. Methods

The data used in this research are data collected by the Federal Employment Agency as part of the labour market survey in the Federation of BiH 2020/2021, based on a master sample of about 10.000 employers obtained from the Tax Administration of the Federation of BiH by stratified random sampling. The sample consists of 1.232 employers registered in the Federation of BiH who had five (5) or more employees, sorted into small, medium and large employers by activities and who regularly pay mandatory taxes and contributions. According to the size, most firms belong to the category of small and micro companies (81.41%) that employ up to 50 workers, followed by medium-sized companies (13.39%), while large employers, which employ over 250 workers, account for 5.19%. By activity, the largest percentage of employers is in the manufacturing industry (26.1%), followed by wholesale and retail trade; repair of motor vehicles and motorcycles (24.7%). However, firms across different sectors have been included in the sample.

4. Results and discussion

Overall, 41.8% of firms in the sample reported a decline in their financial results in 2020 in which most operations of businesses were disrupted by COVID-19 (see Table 1). However, when we compare female-dominant firms (more than 50% of workers are female), the distribution of firms that reported decline, growth and stagnation vary. Among 341 firms that are female-dominant, 50.1% reported a decline, in comparison to 38.6% of male-dominant firms.

Table 5. *The number and percentage of firms by reported financial impact, by gender*

Financial effects in 2020	Male-dominant firms		Female-dominant firms*		Total	
Decline	344	38.6%	171	50.1%	515	41.8%
Growth	216	24.2%	71	20.8%	287	23.3%
Stagnation	310	34.8%	95	27.9%	405	32.9%
No response	21	2.4%	4	1.2%	25	2.0%
Total	891	100.0%	341	100.0%	1232	100.0%

* Firms with more than 50% of female workers

Source: Authors' research

Women dominate in only four out of 15 economic activities: accommodation and food service activities (52.4%), wholesale and retail trade; repair of motor vehicles and motorcycles (58.8%), Arts, entertainment, and recreation (71.3%) and other service activities (76.6%). These results are also in line with the women employment across OECD countries – women make up 53% of employment in food and beverage services, 60% in accommodation services and 62% in the retail sector (Queisser, 2021, p. 249). Overall, women in Bosnia and Herzegovina represent 40.7% workforce in the sampled NACE sections. Table 2 shows the proportion of employed women in total employment by included NACE sections, with three additional statistics: percent of newly employed women, percent of laid-off women and percent of retired women. In these four broad categories of economic activities, women were also mostly affected by layoffs, but also benefited by new employment.

Table 6. *The women's participation in the market*

NACE section	% of employed women ¹	% of newly employed women ²	% of laid off women ³	% of retired women ⁴
B (Mining and quarrying)	8.6%	11%	4.8%	16.4%
C (Manufacturing)	37.9%	40%	44.5%	38.4%
D (Electricity, gas, steam and air conditioning supply)	26.3%	23%	33.3%	0.0%
E (Water supply; sewerage, waste management and remediation activities)	14.8%	4%	4.3%	26.7%
F (Construction)	9.3%	0%	1.4%	22.2%
G (Wholesale and retail trade; repair of motor vehicles and motorcycles)	58.8%	57%	50.7%	35.4%
H (Transportation and storage)	13.5%	15%	1.5%	0.0%
I (Accommodation and food service activities)	52.4%	70%	59.6%	56.0%
J (Information and communication)	42.6%	36%	28.8%	0.0%
K (Financial and insurance activities)	30.4%	-	43.3%	-
L (Real estate activities)	38.5%	0%	21.7%	-
M (Professional, scientific and technical activities)	41.0%	45%	30.6%	55.6%
N (Administrative and support service activities)	12.0%	13%	11.7%	5.9%
R (Arts, entertainment and recreation)	71.3%	51%	59.4%	0.0%

S (Other service activities)	76.6%	73%	37.0%	-
Total	40.7%	37%	41.3%	30.8%

¹In relation to total employed persons in observed NACE section

²In relation to total number of employed persons in observed NACE section

³In relation to total number of laid of persons in observed NACE section

⁴In relation to total number of retired persons in observed NACE section

Source: Authors' research

Women employment were the most affected in the accommodation and food service activities, where the percentage of change is -28.9%, indicating that a larger number of women were laid off than employed in the observed NACE section. A significant decrease can also be observed in the trading economic activities (G), with a 5.8% decrease of women workers, and in financial and insurance activities (K), with a 5.7% decrease.

Table 7. *The change of number of female employees*

NACE section	Employed women in the sample	Change in the number of employed women	Percentage change
B (Mining and quarrying)	259	1	0.4%
C (Manufacturing)	11,863	-271	-2.3%
D (Electricity, gas, steam and air conditioning supply)	26	1	3.8%
E (Water supply; sewerage, waste management and remediation activities)	149	1	0.7%
F (Construction)	439	-3	-0.7%
G (Wholesale and retail trade; repair of motor vehicles and motorcycles)	12,869	-744	-5.8%
H (Transportation and storage)	210	16	7.6%
I (Accommodation and food service activities)	755	-218	-28.9%
J (Information and communication)	1385	43	3.1%
K (Financial and insurance activities)	229	-13	-5.7%
L (Real estate activities)	116	-5	-4.3%
M (Professional, scientific and technical activities)	558	-1	-0.2%
N (Administrative and support service activities)	315	3	1.0%
R (Arts, entertainment and recreation)	1243	-59	-4.7%
S (Other service activities)	259	1	0.4%
Total	30,675	-1248	-4.1%

Source: Authors' research

When compared the percentage change of men and women employed, women were more affected in 2020. Overall, the number of women employed was reduced by 4.1% while men were 2.6%. Women were affected more than men in seven NACE economic activities (see Table 4). However, since women dominate in only four economic activities, this misbalance indicates that women were affected more than men across different activities.

Table 8. *The percentage change of men and women employment by NACE economic activities*

NACE section	% change in the number of women employed	% change in the number of men employed	More affected
B	0.4%	-0.1%	Men (0.5%)
C	-2.3%	-0.5%	Women (1.8%)
D	3.8%	8.2%	Men (4.4%)
E	0.7%	3.3%	Women (2.6%)
F	-0.7%	2.6%	Women (3.3%)

G	-5.8%	-9.3%	Men (3.5%)
H	7.6%	-6.3%	Men (13.9%)
I	-28.9%	-25.4%	Women (3.5%)
J	3.1%	2.8%	Men (0.3%)
K	-5.7%	-3.2%	Women (2.4%)
L	-4.3%	-6.5%	Men (2.2%)
M	-0.2%	-4.0%	Men (3.8%)
N	1.0%	-2.5%	Men (3.4%)
R	-4.7%	-2.2%	Women (2.6%)
S	0.4%	-16.5%	Men (16.8%)
Total	-4.1%	-2.6%	Women (1.5%)

Source: Authors' research

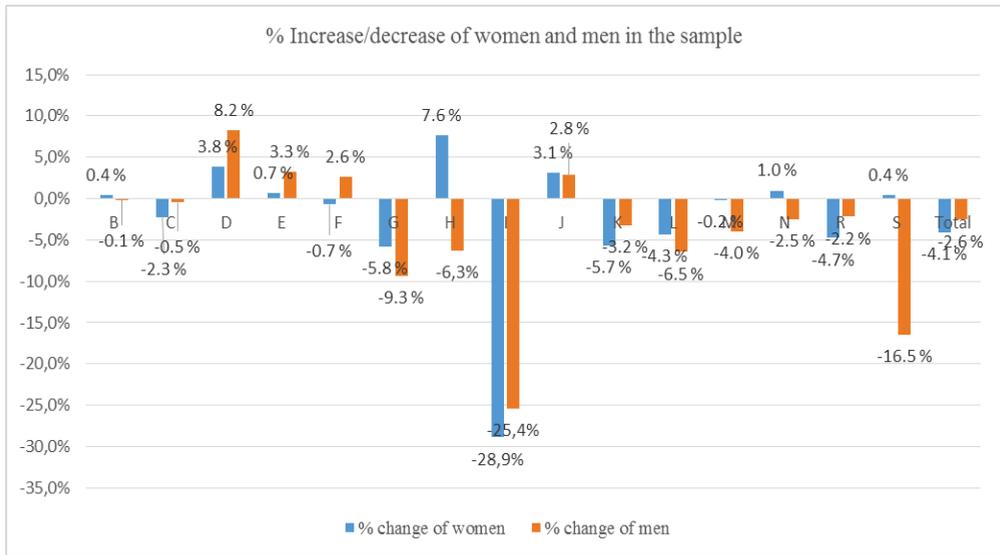


Figure 1. The percentage change of men and women employment by NACE economic activities

Source: Authors' research

In Table 5, we present coefficients and their significance values in a logistic regression model in order to determine whether enterprises with a larger proportion of women in their total number of employees are more likely to report a decline in their financial reports. The dependent variable represents a dummy variable, indicating whether an enterprise has reported a decline in its financial results. The independent variables, besides variables of interest, include multiple dummy variables: the size of an enterprise, age, and economic activities according to NACE classification. The variable of interest is women participation, measured as a proportion of female workers in a company. Our results show a one percent increase in the proportion of female employment in an enterprise, we expect to see about 0.04% decrease in the odds of being an enterprise with declining financial results. These results might indicate that enterprises with a higher proportion of female workers are less likely to experience a decline in their financial reports. However, the odds for enterprises in R and S to report a decline, which mostly employ female workers, are about 668% higher than in other economic activities.

Table 9. Logistic regression results

Predictors	Description	Coefficient (B)	Std. Err.	Exp (B)
Women participation	Proportion of female workers in a company	-0.043***	0.011	0.96
Small enterprise	=1 if a small enterprise	1.43	1.03	4.17
Age (older than 10)	=1 if older than 10 years	0.56	0.57	1.73
Economic activity (Reference category: Other sectors)				
F	Construction	-0.80	1.13	0.45
G, H and I	Trade; transportation and storage; Accommodation and food service activities	0.72	0.61	2.05
J	Information and communication	1.09	1.15	2.99
M and N	Professional, scientific and technical activities; Administrative and support service activities	1.72**	0.67	5.59
R and S	Arts, entertainment and recreation; Other service activities	2.87***	0.85	17.68
Constant		-5.32	1.21	0.01

Dependent variable: Financial results (=1 if decline), (Pseudo) R² = 0.1443 (14.43%), N = 1.214, mean VIF 1.18

*** Significant at 0.01 level, ** Significant at 0.05 level, *Significant at 0.10 level.

Source: Authors' research

5. Conclusions

The paper contributes to a better understanding of the effects of COVID-19 on women employment across different sectors of economies. We examined whether women were more affected by the COVID-19 crisis in the Federation of Bosnia and Herzegovina. Women have been traditionally underrepresented in the labour market as a consequence of the lower participation of female employees in particular industries. Several theories emerged to explain the differences between male and female employment, including neoclassical economists in the human capital school; dual labour market theorists; labour market segmentation theorists; and feminists who use the term 'reserve army'. We examined whether women were more affected by the COVID-19 crisis in the Federation of Bosnia and Herzegovina. Our results show that 50.1% of female-dominant firms reported a decline, in comparison to 38.6% of male-dominant firms. Women dominates in only four out of 15 economic activities and yet they were affected more than men in seven out of 15 economic activities. The results could be explained by the traditional role women have in society, such as taking care of children and elderly. When compared the percentage change of men and women employed, women were more affected in 2020. Overall, the number of women employed was reduced by 4.1% while men were 2.6%. The results of this study might be valuable in promoting the need to design different measures to fight low women labour market participation. Women should be better supported when designing measures to protect workers from unexpected events such as COVID-19, including higher income support, helping firms to adjust working time or introducing flexible working hours.

There is a risk that working women who became inactive during the crises can have adverse effects on progress towards gender equality, as was the case during the 2008 economic crisis. This might be a reason for widening the gender gap by interrupting female working careers to a greater extent than men and reducing their pension funds, which were already lower than men's before the crisis. It could widen gender-based poverty. All these aspects should be further analysed, especially as an

input for social programs to cope with the recent economic crisis to ensure gender equality and support for women.

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