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Women's Entrepreneurship in Organic Production in Serbia



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ABSTRACT

In this short study, an analysis of the position of women's entrepreneurship in the field of organic food production in Serbia was performed, with an indication of the general relationship in employment and permanent gender inequality, both in our country and in the world. Considering digitalization and automation in many spheres of life in the modern world, a review of trends and competitiveness of women in the labour market is given and the analysis of data provided by the Ministry of Agriculture, Forestry and Water of the Republic of Serbia (Annual Reports) shows the number of female entrepreneurs in organic production as a promising branch of economy, with an overview of all aspects that have slowed down, reduced, or prevented better results in this area.

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Introduction

Viewed throughout history, rightly or wrongly, the different status and position of women in relation to men has been clearly emphasized, in almost all social forms. They were natural partners in creating a family, hard workers in preserving the household, but they were also an object of the acquired right by purchase or kidnapping. One possible way out of such inequality is the branch in which women are traditionally involved, and that is domestic food production. With the growing development of organic food production, its role becomes unavoidable. This topic has emerged in recent years, in our country and in the world, as very important, because in several aspects it can affect the structure and development of society, and studies on the position of women entrepreneurs in the region clearly indicate opportunities but also partial inequality in relation to men. Many things were also influenced by the appearance of the global Covid-19 pandemic. The pandemic severely affects such sectors of the economy as tourism, logistics and transport, the restaurant and hotel business, the leisure industry and a large number of industrial sectors other than agriculture (Petrunenko et al., 2021). Agriculture remains a relevant branch that can bring prosperity to the women of our climate.

The Position of Women in the Labour Market

The ways of women empowerment and reducing gender disparity regarding the adoption of modern agricultural technologies has been widely investigated in the literature (Radovic Markovic, Kabir & Jovicic, 2020). In the modern world, with technological development, science and education, position of women has absolutely changed, but still, at least in many backward environments, they are not of an equal status with men. In general, women are facing more difficulties in running their businesses than men (Ministry of Agriculture, Forestry and Water Management, 2020).

Although it cannot be said publicly and legally that a woman is in a subordinate position, it is tacitly implied that she cannot compete on an equal footing with male representatives in difficult jobs, especially in industry. So, in those areas, men's incomes are usually higher. In many

industries, especially in recent years, the transition to automated and digitalized processes, for which both sexes compete equally, has been gaining momentum, but there is still a need for manual interventions on robust installations that require strength, so it is usually more flexible for man. Given its multiple usability, it is obvious that when hiring in such companies, preference is given to the stronger sex. Only greater digitalization, which offers both sides jobs they can do successfully, provides an opportunity to achieve gender equality, precisely according to the goals of women's empowerment, as one of the 17 UN Sustainable Development Goals (2021), because the Global Report of the World Economic forum for 2020 clearly indicated that this problem will not be eliminated in the next period for almost a century.

A study on the rapid forced replacement of workers in jobs that require routine work and movements, repeating the same tasks, shows that men do it easier, so automation in production has brought an undoubted advantage to this persistent category. But when it comes to work tasks that initially require greater and faster flexibility, reasoning and common sense, women demonstrate undoubtedly better adaptability, i.e. “show faster growth in the share of non-routine, analytical and interpersonal tasks” (Piasna & Drahekoupil, 2017). Optimal organizational and managerial measures for the successful implementation of the digital transformation of individual work organizations must bring as little movement and loss of the status of protected citizens, and their implementation is necessary because it is part of the development of society that cannot be stopped. In the cases where the information system cannot adapt to the new requirements, companies have to establish new business functions (Erceg & Zoranović, 2020). With the digitalization of work, the business environment and working conditions have changed (Radovic Markovic M., Vučekovic & Markovic, 2021).

Given the forecasts of the dismissal of an increasing number of manual workers (due to the digitalization of the process), analytical and consulting agencies give moderate forecasts. 6% of employees are expected to be laid off by 2025, while research on the future of the work indicates that “by 2025, 85 million jobs could be abolished due to a change in the division of labour between humans and machines” (World Economic Forum, 2020). Analyses conducted by Bain & Company in 2020 predict that 20 to 25% of existing jobs will be eliminated by the end of this decade.

1. The arrival of the global Covid-19 pandemic stopped many upward trends; however, the need for healthy food and the desire

to know the origin of foods is likely to be even greater. Thus, organic food is a promising business. Organic farming responds to a specific consumer demand for sustainable food products, promoting more sustainable farming practices and contributing to the protection of the environment and improved animal welfare. This growing demand for organic products is matched by a rapidly growing production: EU organic area increased by 70% from 2007 to 2017, and organic retail sales reached EUR 34 billion in 2017, providing farmers with further added value on their production (European Commission, 2019).

Nowadays, consumers of agro-food products around the world are demanding a better quality of products, which represents a major market challenge (Milanovic, Nikitovic & Vujicic, 2020).

Support for organic food production and women in business must be done by the state. Without state assistance and good promotion, it is very difficult to raise citizens' awareness of organic food, as well as to increase the number of women entrepreneurs.

In countries where there is a significant amount of public promotion of women entrepreneurs, the environment for women entrepreneurs tends to be more munificent. This supportive environment is extremely important in enabling women to mobilize the resources and networks they need to create and grow viable enterprises. Public messages reinforcing the role of women as entrepreneurs and the promotion of role models serve to raise the visibility, credibility, and legitimacy of women's economic activity (Stenevson & Lundstrom, 2002).

Analysis of the Participation of Women Entrepreneurs in Organic Production in Serbia

Agricultural production is one of the oldest industries and it has a particularly significant social role to feed the world's population, which is experiencing a steady increase (Lapcevic & Nikitovic, 2020). The agricultural sector in the Republic of Serbia has a very high economic and social significance, since it has a substantial share in creating the gross domestic product and employing a large number of people (Milanovic, Nikitovic & Vujicic, 2020). Organic production is regulated by law and includes control and certification of processes and products. Unlike the conventional one, the aim is to improve the health and productivity of land,

plants, animals, and people, as well as to create general harmony. Care is taken to preserve ecosystems, maintain and increase soil fertility, as well as reduce pollution (Mirecki, Wehinger & Jaklič, 2011).

The meaning and purpose of this study is to point out the position of women entrepreneurs in Serbia. Given the high unemployment of the female population, especially those with lower and secondary education, there is a chance that organic production sector will contribute to a rapid increase in living standards in the country, as well as the balance in gender equality in employment. In view of the unstoppable growth of automation and digitalization in business, and thus the threat of job losses, two logical hypotheses are imposed:

- H1. Automation and digitalization of jobs will not significantly affect the sector of organic food production in Serbia, since such cultivation requires a lot of manual labour, and the participation of women will increase from year to year.
- H2. With the opening of small and medium-sized rural farms for organic food production of plant and animal origin, in which greater involvement of women entrepreneurs is expected, the existing gender gap in income (earnings) will be significantly reduced.

In 2017, Serbia had 15,298 ha on which organic production takes place, or 0.44% of the total area. Compared to previous years, that is an exceptional growth of 62%, but in relation to the world and the potential we have, that is insufficient (Tabaković et al., 2017).

From 2013 until today, when more serious records are kept, the number of certified companies for participation in organic food production has grown from 258 (2013) to 573 (2020), (Ministry of Agriculture, Forestry and Water Management, 2021) but these figures must be taken carefully, because there are not only organic food producers, but in this list also contains the entrepreneurs engaged in import, export, trade. In any case, apart from entrepreneurial companies that are titled with words, then Ltd, the list also includes those with personal names. The number of women among them can be seen in the following table.

Table 1: The number of certified companies for participation in organic food production (2013-2020)

Year	Total	Company, Ltd	Men	Women	% Women
2013	258	119	103	36	13.95 %
2014	291	122	125	44	15.12 %
2015	334	143	146	45	13.47 %
2016	390	189	145	56	14.36 %
2017	434	203	174	57	13.13 %
2018	500	246	190	64	12.80 %
2019	513	246	205	62	12.09 %
2020	573	249	240	84	14.66 %

Sources: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

The numbers in Table 1 do not have to say much about the engagement of women in the production of organically treated food, since there are many married couples, and even entire families who unite their work in this business but are more an indicator of the number of certified companies owned by woman. Although the total number of female certificates is growing permanently from year to year (except in 2019), the percentage in relation to the total of certified entrepreneurs, subcontractors, and associations for activities in the organic production is mostly equal: from 13.5 to 15%. In 2020, when the global Covid-19 pandemic appeared, which did not bypass our country either, the total number increased by 60, and the number of female entrepreneurs by 22. The reasons for this increase lie in the tendency to work as much as possible from home, with little interference with people, due to fear of infection, then due to the reduction of the labour market in public institutions (except health care), or direct job losses. In fact, turning to mini-farms and plant processing, poultry farming, beekeeping, then collecting forest fruits and processing organically produced food (for use, further distribution, and export) is a path that better situated countries have already gone through, and where many female entrepreneurship has found realistic chances for work and decent earnings.

Even the following Table 2 cannot fully reproduce the picture of the type of activity in organic food production occupied by women, because here too most of the work is done as a team, as a family, but it gives indications of the work in which women are more engaged. It is noticeable that the largest part of their employment is in plant production, mainly in vegetables, and in crops where there is a need for constant processing (often

related to exports). However, it is possible to single out the main occupations from the certificates themselves, and that is engaging in pure plant organic production, especially related to the seasonal production of vegetables and berries, occasionally combined with livestock production, mainly poultry. In the case of organic plant production, the number of women participants slowly but permanently grew, so from 29 (2013) it reached the number of 60 (2020), which is an increase of over 100% in 8 years. In trade, both domestic and cross-border, many certified companies with a common name have many women behind - as owners, or only as employees, but these data are not transparent.

Table 2: Number female entrepreneurs in organic plant production (2013.-2020)

Year	Total female entrepreneurs	Plant production	Plant production and export	Crop and livestock production	Plant and livestock production and exports	Processing	Processing and export
2013	36	31	-	5	-	-	-
2014	44	35	-	7	-	2	-
2015	45	37	-	8	-	-	-
2016	56	48	-	6	-	2	-
2017	57	49	-	6	-	-	2
2018	64	54	-	7	-	3	-
2019	62	52	-	6	-	4	-
2020	84	64	10	5	4	1	-

Source: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production <http://www.minpolj.gov.rs/organska/>

The following Table 3 shows that the nominal number of women entrepreneurs in the production of organic food (by category) is increasing from year to year (except 2019), but in the percentage of certified producers on an annual basis, this growth is quite slow. The great impact on the branches that require a clean environment (water, air, vegetation), such as honey and bee products, along with collecting activities (forest fruits and plants) in recent years is in absolute stagnation, which refers to the engagement of women entrepreneurs in these activities. The most probable stagnation is due to the inadmissible attitude of society (state) towards environmental standards because the state's orientation in energy is focused on the use of low-calorie coal, which increases the carbonization of the environment and inevitably pollutes air, water, and soil. The economic

power of the state does not provide significant opportunities to avoid that or at least reduce the harmful effect. In fact, harmful particles penetrate into groundwater, so from sources that have been abundant and clean for centuries, healthy drinking water cannot be expected in the future. The worst thing about that is the fact that such damages cannot be eliminated in any way, regardless of possible future large investments. It is important for this study that the changed ecological conditions of our climate directly affect all activities of organic production, especially those that require maximum clean unpolluted forest, water, and air, because these are the prerequisites for the development of beekeeping and collecting activities (mushrooms, berries, and herbs).

Table 3: Relations between main activities and total number of Certified Woman Manufacturers for 2013-2020

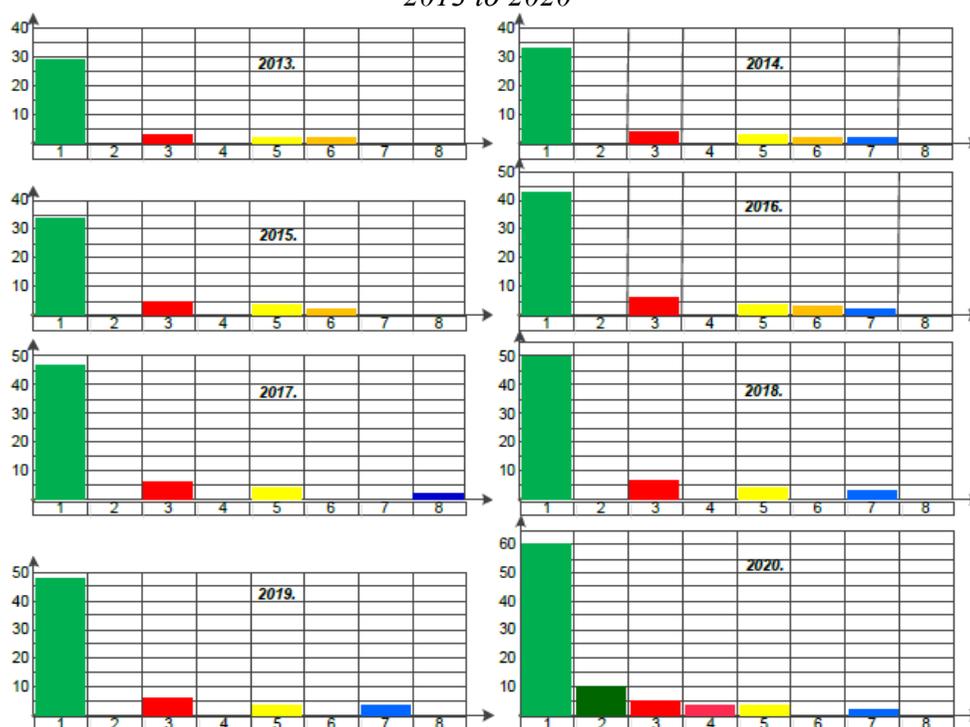
No	Activity	Year	2013	2014	2015	2016	2017	2018	2019	2020
	Number of Certified Woman Manufacturer		36	44	45	56	57	64	62	84
			13.95% of 258	15.12% of 291	13.47% of 334	14.36% of 390	13.13% of 434	12.80% of 500	12.09% of 513	14.66% of 573
1	Plant Organic Production		29	33	34	43	47	50	48	60
			80.56% of 36	75.00% of 44	75.56% of 45	76.79% of 56	82.45% of 57	78.12% of 64	77.42% of 62	71.43% of 84
2	Plant Organic Production & Export		-	-	-	-	-	-	-	10
			0.00% of 36	0.00% of 44	0.00% of 45	0.00% of 56	0.00% of 57	0.00% of 64	0.00% of 62	11.90% of 84
3	Plant & Livestock Organic Production		3	4	5	6	6	7	6	5
			8.33% of 36	9.09% of 44	11.11% of 45	10.71% of 56	10.52% of 57	10.94% of 64	9.68% of 62	5.95% of 84
4	Plant & Livestock Organic Product. & Export		-	-	-	-	-	-	-	4
			0.00% of 36	0.00% of 44	0.00% of 45	0.00% of 56	0.00% of 57	0.00% of 64	0.00% of 62	14.66% of 84
5	Poultry & eggs production		2	3	4	4	4	4	4	4
			5.55% of 36	6.82% of 44	8.89% of 45	7.14% of 56	7.02% of 57	6.25% of 64	6.45% of 62	14.66% of 84
6	Honey & processing of honey nusproducts		2	2	2	1	-	-	-	-
			5.55% of 36	4.55% of 44	4.44% of 45	1.79% of 56	0.00% of 57	0.00% of 64	0.00% of 62	0.00% of 84
7	Processing of Organic Products		-	2	-	2	-	3	4	1
			0.00% of 36	4.54% of 44	0.00% of 45	3.57% of 56	0.00% of 57	4.69% of 64	6.45% of 62	1.19% of 84
8	Processing of Organic Products & Export		-	-	-	-	2	-	-	-
			0.00% of 36	0.00% of 44	0.00% of 45	0.00% of 56	3.51% of 57	0.00% of 64	0.00% of 62	0.00% of 84

Source: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

By analysing the graph below, we can conclude that organic beekeeping in Serbia, where women entrepreneurs had a significant initial

share, has completely dried up, just like the organic products collection activities (unpolluted forest and mountain berries, mushrooms, aromatic herbs, and medicines grass). And all these healthy products are in great demand in the demanding market of Western Europe, precisely because our climate is still relatively unpolluted, due to the slower development of the country's industrialization. Some of the reasons for this situation are increased engagement of foreign investors in the field of mining, metallurgy, and then uncontrolled carbonization of the sky over us, because the electrical sector relies heavily on the use and burning of fossil fuels. All this directly affected the employment of women in the field of organic production, which certainly eliminates the possibility of proving hypotheses about the permanent growth of women's entrepreneurship in Serbia, and reducing the gender pay gap, i.e., significant arrival of female employees with average male incomes.

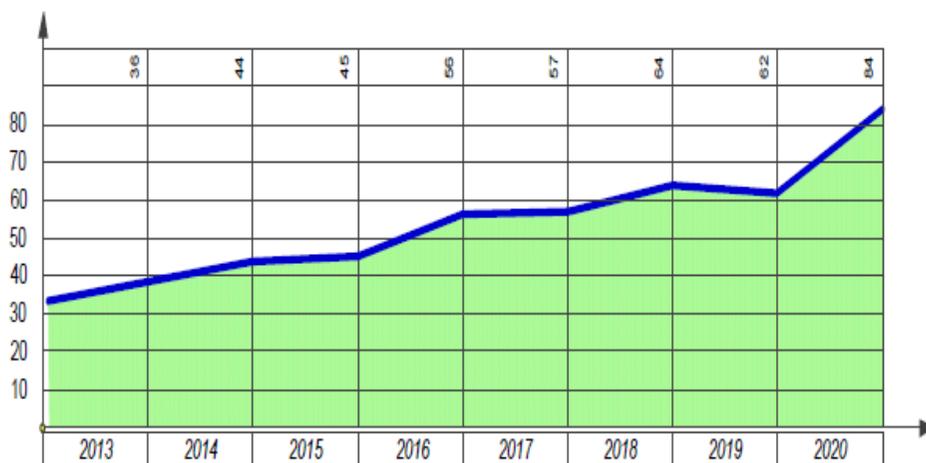
Graph 1: Main activities of Certified Female Manufacturers in period 2013 to 2020



Source: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

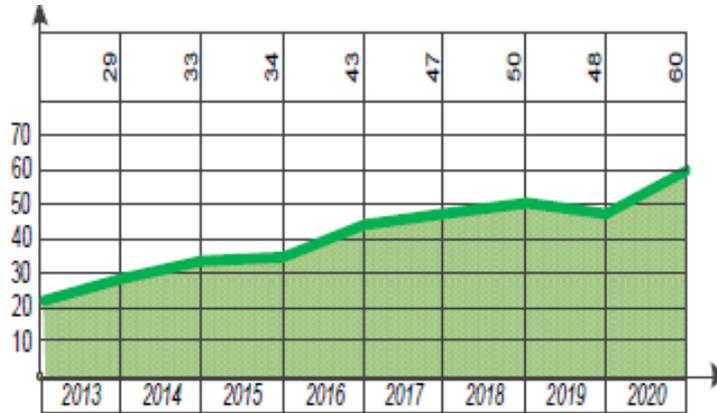
Next graphs clearly show that the share of female entrepreneurship in the production of food of organic origin in Serbia has changed considerably in these seven years, because, apart from plant production (vegetables and fruits, since cereals are on larger plots that have been converted, they are mostly reserved for associations, companies and men, heads of family households), women took part in livestock, poultry (meat and eggs), livestock (lambs, calves and pigs), beekeeping (honey, royal jelly, propolis), as well as in larger processing of organic products. Like any other country, ours should increase incentive measures, which could be very important for reducing general female unemployment (especially from the aspect of automation and digitalization of jobs, as well as due to the Covid-19 pandemic). Improvement of domestic competitiveness of healthy items in the market, with an emphasis on exports, could significantly increase the standard of citizenship of the country in general.

Graph 2: Female Manufacturers in Organic Production in Serbia for period 2013-2020



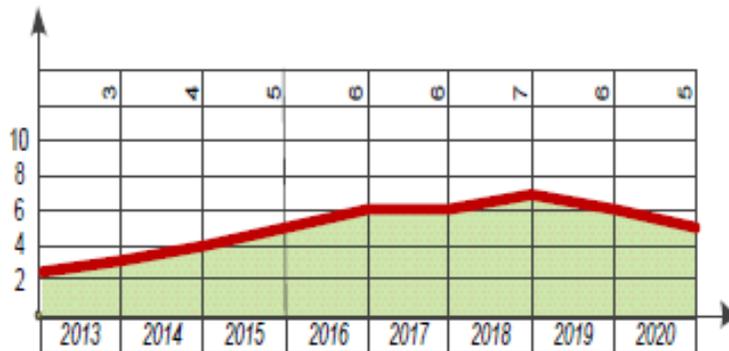
Source: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

Graph 3: Plant Organic production in Serbia by Female Manufacturers for period 2013-2020



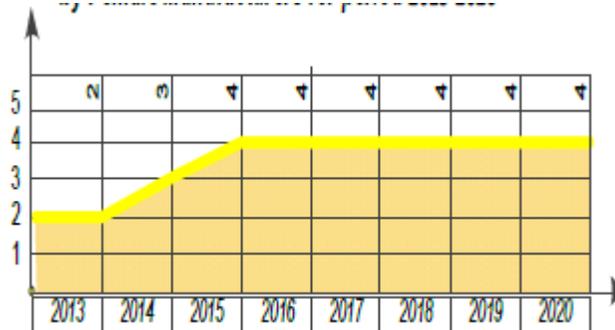
Sources: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

Graph 4: Plant & Livestock Organic production in Serbia by Female Manufacturers for period 2013-2020



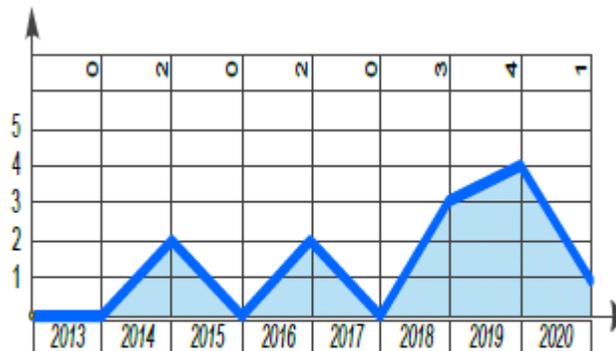
Sources: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

Graph 5: Poultry & Eggs Organic production in Serbia by female Manufacturers for period 2013-2020



Sources: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

Graph 6: Processing of Organic Product in Serbia by Female Manufacturers for period 2013-2020



Sources: Author's own calculations based on data from - Ministry of Agriculture, Forestry and Water Management. Organic production. <http://www.minpolj.gov.rs/organska/>

The strong growth rates in EU, both of the production and consumption indicate that the organic market has not yet reached its maturity stage and further growth can still be expected. Organic farming is already responding to further emerging consumer trends such as veganism and demand for locally produced food products, turning these challenges into opportunities [7]. Although Serbia lags behind the developed EU countries, there is still progress and generally constant growth in organic production, and if we

follow the example of EU countries, we will give a chance to women entrepreneurs.

Conclusion

Considering all aspects of the above analysis, Hypothesis 1 (Automation and digitalization of jobs will not significantly affect the sector of organic food production in Serbia, as such cultivation requires manual labour, and women's participation will increase from year to year), despite the real expectations, has not been fully proven. In fact, other circumstances in the country (economic stagnation, indebtedness to foreign investors and the emergence of the global Covid-19 pandemic) have conditioned that only expectations in the first part (about the minor impact of automation and digitalization on organic production) were justified. Only by stabilizing the country's economy and overcoming the pandemic crisis will we be able to relevantly measure this impact, because a healthier situation could lead to a more significant participation of women in this area.

Uncertainty of business (regardless of gender) at the global level, and therefore in Serbia, made it impossible to prove the Hypothesis 2 (By opening small and medium-sized rural farms for organic food production of plant and animal origin, in which greater involvement of women entrepreneurs is expected, the existing gender gap in income (earnings) will be significantly reduced), because in recent years in this sector, mainly due to the pandemic and economic stagnation, is the status quo.

The aim of this research was women's entrepreneurship in the production of organic food in Serbia, from the aspect of domestic market development, but also in cross-border exports, because it could significantly increase the standard of Serbian citizens.

Using public data on the participation of women entrepreneurs in organic production, an attempt was made to prove (or refute) the hypotheses about the minor impact of automation and digitalization of jobs on the sector of organic food production in Serbia and women's participation in it. It was also investigated whether the opening of small and medium-sized rural farms for organic food production, through greater engagement of women entrepreneurs, will significantly reduce the existing gender gap in income (earnings). Unfortunately, various factors prevented a clearer insight into this area, so attitudes remained questionable until some more stable, healthier times.

The unquestionable results of the conducted analysis are the fact that incentive measures for women's entrepreneurship in the field of organic production can bring multiple benefits to society and the state, so they should be improved in all segments. Only greater and more transparent incentives to expand in this area, with an emphasis on women's employment, easier credit routes, a grace period during land conversion, can make significant progress in solving the problem, with benefits for the whole society. While in the more developed and economically stable countries of Western Europe, women have support for the development of their own entrepreneurship in this area, in our country it is still at the beginning. Although it is well known that every type of independent business frees women from discriminatory and inequality, no significant investment for this purpose has been made so far.

The biggest challenges for this study on women entrepreneurs in organic production in Serbia were the shortcomings and non-transparency of data, which indicates the attitude of the state towards this development opportunity. However, based on the available information, there is a large backlog of women's engagement in this area as well.

The study failed to directly point to the permanent growth of women's entrepreneurship, nor to the ways in which greater participation of women in organic food production in Serbia should be developed, but it marked the existing difficulties that hinder this development and focused on the plan and how attention should be paid to professional knowledge and managerial skills to work in these small family companies, but also potentially large businesses.

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