



## POVERTY AND REGIONAL DISTRIBUTION OF THE SELF-EMPLOYED IN SERBIA

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**Abstract:** The economic status of the self-employed is closely related to the level of development and poverty rates observed by region. This observation comes from the heterogeneity of the self-employed group, including those who hire other people or those self-declared as solo entrepreneurs. The secondary statistical data show that employees are more evenly distributed regionally than the self-employed. For instance, self-employed with employees are concentrated in the north, while solo entrepreneurs gravitate to the south of the country. This paper aims to examine further whether the employment status in the form of self-employment correlates with poverty, measured by the at-risk-of-poverty rate, and which factors determine this relationship in Serbia. The data from the Survey on income and living conditions for Serbia are used for the econometric analysis presented in this paper. Some previous findings show that the variables, such as working hours and capital, may moderate the effects of income poverty in those households where the prime source of income comes from self-employment. We confirmed the expected associations between the poverty risk and their predictors only in the Serbia-South region. The results of this paper are essential for advising policies to identify whether the support through entrepreneurial programs follows poverty status regionally and by sector of activity.

**Keywords:** regional sustainability, risk of poverty, self-employment, Serbia

### 1. INTRODUCTION

The main goal of this paper is to study entrepreneurship from the perspective of opening new opportunities that would trigger employment growth and mitigate poverty threats, especially when it is about solo self-employed. Solo entrepreneurs not only have the largest share in the structure of the self-employed, but a significant number of them deal with this profession out of necessity (for comparisons among countries see, for instance, De Vries et al., 2020; Cumming et al., 2020; Lambrecht & Beens, 2005).

Although the number of entrepreneurs is growing year over year, only in 2020, with 298,279, the increase compared to 2018 was more than 9% (Statistical Office of the Republic of Serbia, 2022), they remain a category in the labor market that is at higher risk of poverty than other active people. In addition to the unemployed, who are at the highest risk of poverty (50.7% in 2017), the self-employed with a rate of 35.5% in 2017 are the next risk group (Ognjenović & Pavlović, 2021). Only a slight improvement in their status, compared to other categories, may be noticed if material deprivation is observed. This indicator of standards of

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living in 2017 amounted to 13.4% - exhibiting a more than doubled decrease compared to the previous periods (Ognjenović & Pavlović, 2021). Many studies have a positive approach to the analysis of entrepreneurship, but some bring the entrepreneurial sector in direct connection with the competitiveness of the national economy (Petković & Đukić, 2018).

Support for the growth of this employed category is largely determined by its involvement in the regional and sectoral structure. One of the examples is entrepreneurship support programs and employment incentives implemented by the National Employment Service. However, in addition to stimulating the growth of the entrepreneurial sector, these programs also have a pronounced social dimension (National Employment Service, 2019, 2022).

Therefore, in this paper, we have the intention to identify the factors that are directly related to the at-risk-of-poverty rate for the self-employed. Our results differ depending on the regional distribution of the self-employed, but the economic sector doesn't explain the potential risk of poverty.

## 2. SELF-EMPLOYMENT IN THE REPUBLIC OF SERBIA

In addition to the fiscal stabilization and implementing needed economic reforms, a decrease in unemployment in Serbia over the last several years has been a key positive trend. Significant progress in labor market indicators indicate the unemployment rate to have dropped (from 19.2% in 2014 to 9% in 2020) and the employment rate to have increased by roughly 7 percentage points from 2014 to 2020 (Statistical Office of the Republic of Serbia-SORS, 2021).

When deconstructed by gender, the ratio of men employed to that of women has been changing since 2014, in that women are gaining ground by having a higher presence in the labor market. However, men are still maintaining a stronger foothold in the labor market than do women. As derived from the 2020 data, approximately 1,616,600 men and 1,284,400 women were employed (SORS, 2021).

Table 1. Number of employees in Serbia (in thousand), 2014-2020

		2014	2015	2016	2017	2018	2019	2020
Total	Total	2,559.4	2,574.2	2,719.4	2,794.7	2,832.9	2,901.0	2894.8
	Male	1,457.0	1,466.3	1,531.6	1,565.1	1,590.1	1,616.6	1609.4
	female	1,102.5	1,107.9	1,187.8	1,229.5	1,242.9	1,284.4	1285.3
Employed	total	1,748.0	1,797.8	1,858.3	1,940.2	2,032.7	2,097.7	2113.8
	male	944.7	964.1	991.6	1,035.4	1,086.4	1114.8	1124.9
	female	803.3	833.7	866.7	904.9	946.4	982.9	988.9
Self-employed	total	599.6	567.2	643.2	692.8	642.6	666.2	648.1
	male	448.3	438.9	475.3	483.3	457.4	463.9	444.8
	female	151.3	128.3	167.8	209.5	185.2	202.3	203.2
Self-employed but employing others	total	92.8	99.6	92.9	94.3	103.4	98.3	90.2
	male	66.3	73.7	69.7	68.5	73.2	69.4	63.3
	female	26.5	25.9	23.2	25.8	30.3	28.9	26.9
Self-employed without employees	total	506.7	467.5	550.3	598.5	539.1	567.9	557.9
	male	381.9	365.1	405.6	414.8	384.2	394.5	381.5
	female	124.8	102.4	144.6	183.7	154.9	173.4	176.3
Contributing family workers	total	211.9	209.2	217.9	161.6	157.6	137.1	132.9
	male	64.1	63.3	64.6	46.5	46.3	37.9	39.7
	female	147.9	145.9	153.3	115.2	111.3	99.2	93.2

Source: SORS, Labor Force Survey, 2014-2020.

The number of self-employed has also been steadily on the rise since 2014. In 2020, there were a total of 648,100 individuals who were self-employed (around 22% of all employed). This stands in stark contrast to 2014, when 599,600 self-employed individuals were recorded. While men are more likely to be self-employed than women, the number of self-employed women has been increasing. Compared to 2014, when there were 151,300 self-employed women recorded, in 2020, there were 203,200. As a further result, the number of contributing family workers decreased significantly from 2014 to 2020, from 211,900 to 132,900, respectively (Table 1).

Observed by regions, the largest number of self-employed (people aged 15+) was recorded in Šumadija and Western Serbia region (215,600), while Belgrade region had the lowest number of self-employed, 79,900 (Table 2). In 2020, the number of contributing family workers in Šumadija and Western Serbia region was 79,300, in Belgrade was 10 time lower.

Table 2. Number of employees in Serbia by region (in thousand), 2020

	Serbia-North		Serbia-South		
	Belgrade region	Vojvodina region	Šumadija and Western Serbia region	Southern and Eastern Serbia region	Region of Kosovo and Metohia
<b>Total</b>					
Aged 15+	738.3	765	820.6	571	...
Self-employed with employees	24.7	24.5	26.9	13.9	...
Self-employed without employees	79.9	120.2	215.6	142.2	...
Employees	625.8	599.7	498.7	389.6	...
Contributing family workers	7.9	20.5	79.3	25.2	...
<b>Male</b>					
Aged 15+	386.7	432.4	465.9	324.4	...
Self-employed with employees	17.2	16.9	19.5	9.6	...
Self-employed without employees	55.8	89.7	146.1	89.9	...
Employees	310.7	318.1	278.9	217.2	...
Contributing family workers	3	7.6	21.3	7.7	...
<b>Female</b>					
Aged 15+	351.6	332.6	354.7	246.5	...
Self-employed with employees	7.5	7.6	7.4	4.3	...
Self-employed without employees	24.1	30.5	69.5	52.3	...
Employees	315	281.6	219.8	172.4	...
Contributing family workers	4.9	12.8	58	17.5	...

Source: SORS, Labor Force Survey, 2020.

Table 3. Basic facts about the employed (in %), 18 years and over

	2015				2016				2017			
	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers
<b>Age</b>												
18-29	8.0	5.3	10.7	10.5	6.0	5.9	10.5	6.6	5.4	5.9	10.9	6.1
30-54	57.0	47.3	46.8	35.2	58.4	46.7	46.0	29.7	55.1	47.2	45.1	22.0
55-64	20.4	22.7	21.8	19.8	21.9	21.9	21.5	18.3	19.8	21.3	21.0	19.6
65 +	14.6	24.8	20.7	34.4	13.7	25.5	22.1	45.4	19.7	25.6	23.1	52.3
<b>Gender</b>												
Male	67.6	69.6	50.4	24.0	65.5	67.8	50.8	22.9	70.8	65.7	50.9	19.3
Female	32.4	30.4	49.6	76.0	34.5	32.2	49.2	77.1	29.2	34.3	49.1	80.7
<b>Education</b>												
Low	5.3	22.6	4.6	40.6	3.5	21.0	3.8	49.7	4.9	19.5	3.9	47.6
Medium	71.3	67.5	72.0	54.7	68.7	68.8	73.2	47.1	64.1	68.1	73.7	50.7
High	23.4	9.8	23.4	4.7	27.8	10.2	23.0	3.2	30.9	12.4	22.5	1.7

Source: SORS, SILC 2015-2017.

In the age range of 30-54, those who are self-employed with employees have the largest share for 2015 at 57.0%. This percentage noticeably falls by 2 percent point to 55.1 % in 2017. In all groups, according to SILC data for 2019, those most likely to be self-employed are those who have only obtained a medium education (self-employed without employees-64.1% and self-employed without employees-68.1%), while those least likely have less than the same level of education. When broken down by gender, males tend to be more self-employed with employees than females, where in 2019 men represent 70.8% of this category compared to 29.2% of women. The share of self-employed women decreased while the number of men increased from 2015 to 2017. These figures of self-employed with employees match the overall trends as those who have only an elementary education or lower are the least represented among the self-employed. It is far more common for men to be self-employed than for women, regardless of age or education (Table 3).

Those most exposed to being among the working poor over the course of three years (2015-2017) are those who are family workers. Regardless of category, the poverty rate holds at a quarter of all employees on average. Employees are the least likely to face the poverty rate, where their percentage never rose above 20 % (Table 4).

Table 4. At-risk-of-poverty rate by occupational status (in %), 18 years and over

	2015	2016	2017
Self-employed with employees	24.8	20.7	23.9
Self-employed without employees	40.5	38.2	39.2
Employees	18.5	18.2	17.1
Contributing family workers	47.5	45.3	45.8

Source: SORS, SILC 2015-2017.

Table 5. Who are the poor among the employed (in %), 18 years and over?

	2015				2016				2017			
	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers
<b>Age</b>												
18-29	4.9	3.8	10.8	11.5	2.2	4.9	10.2	7.6	8.1	3.1	9.5	3.4
30-54	56.7	45.9	53.1	37.4	56.2	47.1	51.6	26.1	59.7	45.6	49.0	17.2
55-64	20.9	23.4	24.0	17.2	28.9	20.9	25.1	17.4	19.1	21.8	26.2	19.8
65 +	17.5	27.0	12.1	33.9	12.6	27.1	13.1	49.0	13.2	29.5	15.3	59.7
<b>Gender</b>												
Male	70.3	72.7	57.9	23.4	72.2	71.6	56.8	18.4	66.5	69.8	55.2	18.4
Female	29.7	27.3	42.1	76.6	27.8	28.4	43.2	81.6	33.5	30.2	44.8	81.6
<b>Education</b>												
Low	11.1	28.6	8.9	45.6	8.2	26.2	7.3	57.0	9.3	27.8	8.1	54.2
Medium	77.8	65.3	84.0	51.0	72.9	66.4	84.6	38.6	66.4	65.9	84.6	44.3
High	11.0	6.1	7.1	3.4	18.9	7.4	8.2	4.4	24.3	6.3	7.3	1.5

Source: SORS, SILC 2015-2017.

When further examining the data of the poverty rate, it is evident that there was a sharp growth of the poverty risk from 2015 to 2017 among the self-employed without employees who were 18-29 years of age, changed from 4.9 to 8.1% (Table 5).

There was a dramatic shift in family workers among those between 18 and 29 which fell from 11.5% to 3.4% from 2015 to 2017, respectively; however, this decrease is seen among all age groups apart from 25 -54.

Table 6. At-risk-of-poverty rate by main characteristics of the employed (in %), 18 years and over

	2015				2016				2017			
	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers	Self-employed with employees	Self-employed without employees	Employees	Contributing family workers
<b>Age</b>												
18-29	15.2	29.0	18.6	51.8	7.6	31.6	17.8	52.1	36.2	20.5	15.0	25.4
30-54	24.7	39.3	21.0	50.4	19.9	38.6	20.5	39.9	25.9	37.9	18.6	35.6
55-64	25.5	41.8	20.4	41.4	27.3	36.5	21.3	42.9	23.0	40.1	21.3	46.1
65 +	29.8	44.1	10.8	46.8	19.1	40.7	10.8	48.9	15.9	45.2	11.3	52.3
<b>Gender</b>												
Male	25.8	42.4	21.3	46.3	22.8	40.4	20.3	36.4	22.5	41.6	18.5	43.7
Female	22.7	36.3	15.7	47.9	16.6	33.7	16.0	48.0	27.4	34.6	15.6	46.2
<b>Education</b>												
Low	52.3	51.2	36.3	53.4	48.7	47.6	34.5	52.0	45.1	55.9	35.8	52.1
Medium	27.1	39.2	21.6	44.3	21.9	36.9	21.0	37.2	24.8	37.9	19.6	40.0
High	11.7	25.1	5.6	34.2	14.0	27.9	6.5	61.9	18.8	19.9	5.6	40.1

Source: SORS, SILC 2015-2017.

According to SILC data, women are least likely to face poverty when they seek employment and are not self-employed at 15.6% (2017). Yet, with 46.2% (2017) of the total, women are most likely to be exposed to poverty when they are family workers. Also, 34.6% (2017) of self-employed women without employees are most likely to be in poverty risk. The lower an education obtained, the higher it also correlates to the likelihood of being at the poverty rate. Among the working poor, those who possess less than a high-school or secondary diploma are far more prone to poverty. In contrast, 9.1% of the highly educated are within the poverty risk (Ognjenović & Pavlović, 2021). This number is buttressed by the significantly low number of those who are self-employed without employees and who have obtained a high education at 25.1% (2015) and 19.9% (2017) (Table 6).

### 3. LITERATURE REVIEW

The literature review section draws the conclusions relevant to our research from the papers we initially examined.

Many studies have explored the link between poverty and starting own business and have shown that entrepreneurship positively impacts poverty alleviation (Cumming et al., 2020; Lambrecht & Beens, 2005). Thurik et al. (2008), on the other hand, identify an ambiguous relationship between self-employment and unemployment rates in developed countries. However, they estimated the strong subsequent effect that indicates that growing self-employment rates may eventually reduce the unemployment rate.

De Vries et al. (2020) estimated the relationship between motivation and performance and found that necessity-driven solo self-employed perform worse than those who start a firm from an opportunity.

Analyzing the role of entrepreneurship in emerging economies, Korosteleva & Stępień-Baig (2020) concluded that entrepreneurship contributes to poverty reduction and that women entrepreneurs play a significant role, confirming once more that poverty is not gender-neutral.

Social assistance programs have a positive effect, i.e., they alleviate the negative link between poverty and self-employment, most often in developed economies, pointing out the importance of the redistributive impact of welfare programs (Patel et al., in press).

Yerrabati (in press) found that, in developing countries, the effects of poverty-alleviation strategies with the entrepreneurship as a means of these strategies, from a methodological point of view, may have diverse effects depending on the measure of poverty. Also, income poverty measures may produce ambiguous results and underestimate the proper standards of living of the self-employed (Sevä & Larsson, 2015). In this paper, to avoid methodological doubts, we use the at-risk-of-poverty rate as the unique EU SILC indicator of poverty

### 4. DATA AND METHODS

The data from the 2017 Survey on income and living conditions for Serbia are used for the empirical analysis presented in the paper. That year is selected for data calibration due to the methodological consistency of the survey questionnaire. The data on the sources of income of the self-employed were collected by the Statistical Office of the Republic of Serbia.

We employed the binary logit model with the at-risk-of-poverty rate (AROP) as a dependent variable. Self-employed whose income falls below a threshold of 60% of the national equalized disposable income median may be considered at risk of poverty. In addition, we also

conducted linear correlation analyses as an auxiliary approach for establishing initial associations between the risk of poverty of the self-employed and its predictors.

The empirical specification of the binary logit model with the AROP as the outcome variable is constructed in the form:

$$P(AROP = 1) = 1/[1 + \exp(x'\beta)] \quad (1)$$

By definition the values of the dependent variable are bounded from 0 to 1, while  $x$  represent a set of independent variables, which, in addition, to continuous variables (*working hours*), can also include dummy variables (*indicator variable of self-employed {solo self-employed}, gender {male, female}, education {low, medium, high}, age {18-29, 30-54, 55-64, >65}, economic activity {agriculture, manufacturing & construction, services}*) as factors which predict a low/high risk of poverty. Self-employed with employees, solo self-employed and contributing family workers will be included in the model (1) estimation. We estimated models for each region Serbia-North ( $N_1=422$ ) vs Serbia-South ( $N_2=1.080$ ) separately. For Serbia-North model of AROP, average values ( $\mu$ ) and standard deviations ( $\sigma$ ) of independent variables are as follows: [*working hours*,  $\mu=1174.8$ ,  $\sigma=981.2$ ]; [*self-employed with employees=0*,  $\mu=0.374$ ,  $\sigma=0.484$ ; *solo self-employed=1*,  $\mu=0.571$ ,  $\sigma=0.496$ ; *contributing family workers=0*,  $\mu=0.054$ ,  $\sigma=0.227$ ]; [*male=1*,  $\mu=0.677$ ,  $\sigma=0.467$ ; *female=0*,  $\mu=0.322$ ,  $\sigma=0.467$ ]; [*18-29 y.o.=1*,  $\mu=0.016$ ,  $\sigma=0.127$ ; *30-54 y.o.=1*,  $\mu=0.481$ ,  $\sigma=0.500$ ; *55-64 y.o.=1*,  $\mu=0.236$ ,  $\sigma=0.426$ ; *>65=0 y.o.=1*,  $\mu=0.218$ ,  $\sigma=0.413$ ]; [*low=1*,  $\mu=0.088$ ,  $\sigma=0.283$ ; *medium=1*,  $\mu=0.720$ ,  $\sigma=0.449$ ; *high=0*,  $\mu=0.191$ ,  $\sigma=0.394$ ]; [*manufacturing & construction=0*,  $\mu=0.00$ ,  $\sigma=0.00$ ; *services=0*,  $\mu=0.715$ ,  $\sigma=0.452$ ; *agriculture=1*,  $\mu=0.285$ ,  $\sigma=0.452$ ]. Similarly, for Serbia-South model of AROP, average values ( $\mu$ ) and standard deviations ( $\sigma$ ) of independent variables are as follows: [*working hours*,  $\mu=1031.9$ ,  $\sigma=992.5$ ]; [*self-employed with employees=0*  $\mu=0.203$ ,  $\sigma=0.402$ ; *solo self-employed=1*,  $\mu=0.565$ ,  $\sigma=0.496$ ; *contributing family workers=0*,  $\mu=0.232$ ,  $\sigma=0.423$ ]; [*male=1*,  $\mu=0.563$ ,  $\sigma=0.496$ ; *female=0*,  $\mu=0.437$ ,  $\sigma=0.496$ ]; [*18-29 y.o.=1*,  $\mu=0.017$ ,  $\sigma=0.128$ ; *30-54 y.o.=1*,  $\mu=0.396$ ,  $\sigma=0.489$ ; *55-64 y.o.=1*,  $\mu=0.220$ ,  $\sigma=0.415$ ; *>65=0 y.o.=1*,  $\mu=0.324$ ,  $\sigma=0.468$ ]; [*low=1*,  $\mu=0.280$ ,  $\sigma=0.449$ ; *medium=1*,  $\mu=0.649$ ,  $\sigma=0.477$ ; *high=0*,  $\mu=0.071$ ,  $\sigma=0.257$ ]; [*manufacturing & construction = 0*,  $\mu=0.004$ ,  $\sigma=0.060$ ; *services = 0*,  $\mu=0.479$ ,  $\sigma=0.500$ ; *agriculture=1*,  $\mu=0.516$ ,  $\sigma=0.500$ ].

Thus, the main research question is to examine further whether the professional status of self-employed correlates with the poverty status, measured by the at-risk-of-poverty rate, and which factors determine this relationship in Serbia. Based on the parameter estimates for model (1), four main research hypotheses are tested:

Hypothesis 1: Being solo self-employed increases the risk of poverty.
Hypothesis 2: Being male and self-employed increases the risk of poverty.
Hypothesis 3: Working hours are negatively associated with the risk of poverty.
Hypothesis 4: Capital is negatively associated with the risk of poverty.

Figure 1. Research hypotheses

## 5. RESULTS AND DISCUSSION

The first hypothesis examines the relationship between the risk of poverty and the type of self-employment by region. The intention was to show that exposure to the risk of poverty depends on professional status but varies by region. We calculated pairwise correlation coefficients to show how self-employment status correlates with the AROP rate across regions.

We found a significant correlation between solo entrepreneurs and the AROP rate only in the Serbia-South region ( $r=0.0719$ ,  $p<0.01$ ).

Therefore, we estimated the logistic regressions for each region separately (Table 7). In the Serbia-North region, the odds of being poor for solo self-employed are 1.379 times that of other self-employed; however, the odds are not statistically significant. In contrast, in the Serbia-South region we obtained a statistically significant increase (34.9%) in the odds of being poor for solo self-employed, when other predictors are excluded from the regression.

When it comes to the Serbia-North region, the odds are similar through estimated multiple regressions. Although, it is evident that the solo self-employed are at higher risk of poverty, this cannot be confirmed as statistically significant on the estimated data set. The hypotheses 2 and 3 cannot be confirmed either. We confirmed with a confidence level of 95%, that the primary age groups and lower levels of education increase the odds of being at risk of poverty for the self-employed.

Table 7. Explaining factors of AROP by region

Variable	Serbia-North				Serbia-South			
	Odds-ratio (std. err.)							
Solo-self employed	1.379 (0.402)	1.376 (0.403)	1.379 (0.404)	1.213 (0.361)	1.349* (0.208)	1.391* (0.217)	1.338** (0.216)	1.748* (0.457)
Working hours		1.002 (0.013)	1.002 (0.013)	0.987 (0.016)		0.975* (0.006)	0.972* (0.007)	0.987 (0.031)
Male			0.875 (0.175)	0.898 (0.180)			1.227** (0.153)	1.913* (0.418)
Age								
18-29				2.013 (1.902)				0.846 (0.781)
30-54				2.635* (1.029)				0.827 (0.543)
55-54				2.306* (0.928)				0.986 (0.646)
Education								
Low				4.108* (2.081)				4.528* (3.160)
Medium				1.817** (0.573)				1.793 (0.852)
Sector								
Agri-culture								1.313 (0.317)
N	422	422	422	422	1080	1080	1080	546

Note: \*  $p<0.05$ , \*\*  $p<0.10$ .

Source: SORS, SILC 2017.

Hypotheses 2 and 3 are also confirmed for the self-employed in the Serbia-South region. Increase in the number of working hours reduces the odds of being at poverty risk by barely 3%. The odds of poverty risk among male entrepreneurs are 22.7% higher than the odds for females. In an expanded model, males have 91.3% higher odds of being potentially poor than females. A low level of education increases the odds of poverty risk by more than 3.5 times. We also examined the importance of the sector of activity as a predictor of poverty risk for the self-employed and found no significant relationship between the agricultural sector and poverty risk.

The third hypothesis cannot be directly tested on the available data set. However, looking at the distribution of households by quintiles with the earnings from self-employment as the primary source of total income, it can be concluded that there is a significant gap between

the structure of households and income. Two-fifths of the self-employed in the first three quintiles collect only 16.9% of total income earned from self-employment (Ognjenović & Pavlović, 2021). This indirectly indicates a more significant exposure to the risk of poverty among the self-employed population in Serbia. Likewise, the self-employed activities can be capital-intensive, implying that income poverty measures may produce ambiguous effects and underestimate the proper standards of living of the self-employed (Sevä & Larsson, 2015).

## 6. CONCLUSION

In this paper, we explored the self-employed's poverty risk using the Survey on income and living conditions data for Serbia. The main conclusions may be summarized as follows: (I) although the at-risk-of-poverty rate has decreased over the years, poverty threats remain substantial among the solo self-employed if we exclude contributing family workers; (II) the self-employed of the prime-age (30-54 years old), those with secondary education, and men, in general, compose the structure of entrepreneurs who have a higher risk of being poor; (III) the at-risk-of-poverty rate increases with the age of solo self-employed faster than in other categories of the employed; (IV) although the risk of poverty decreases by gender, this decrease is much slower in the self-employed; (V) employees with a low level of education are at the highest risk of poverty, however, when it comes to the self-employed, the at-risk-of-poverty rate remains high for all levels of education.

The general conclusion is that, compared to other categories of employees, solo self-employed are in a far worse position and are much more at the risk of being poor. This result can be related to a far more heterogeneous structure of these persons, not only observing jobs they perform but also age, the level of education, and regional distribution of solo self-employed stay essential factors.

We have already emphasized the programs which support entrepreneurs are essential; however, the question of sustainability and resilience of businesses to external challenges, and even "black swans" such as the impact of the current (health) crisis, remains.

The share of solo self-employed stood at the level of more than three-fifths out of the total number of self-employed through the observed years. So, the relationship between the support to start the business and the poverty alleviation indicator is questionable and requires further research. Our data confirmed a direct and positive relationship between the status of solo self-employed and poverty risk only for those who pursue their activities in the Serbia-South region. However, this relationship needs to be stronger to be a relevant input for advising policy makers. Still it emphasizes the differences that exist among the self-employed observed by region.

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