

CHAPTER XII

MULTIPLE JOB-HOLDING AND INFORMALITY: MAY PANDEMIC CHANGE THEIR COURSE?

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ABSTRACT

Multiple job-holding was extensively studied during the 1990s. It was shown that this practice has many similarities with informality, and even more, most job offers on a second-job market operate in the informal sector. First studies show the incidence of multiple job-holding in Serbia ranges from 30 percent in the second half of the 1990s to above 10 percent at the end of the 2000s. However, most recent data show that the practice of having more than one job in Serbia had an increasing trend up to 2019, while in 2020, it stood at a level of 7.7 percent of the total employment. This chapter employs the logit models to estimate the propensity of multiple job-holding in both the formal and informal sectors. Although, the results refer to the period before the pandemic, they still reflect the situation with the supply of second jobs in Serbia. The informal sector most likely offers low-paid complementary jobs, whereas the formal sector attracts those who belong to high-skilled occupational groups. An analysis of recent data would probably show that in addition to helping improve the material status of those holding multiple jobs, the number of high-paid secondary jobs is also emerging in growing industries. As multiple job-holding increases with the growth of total employment, it may be expected that the pandemic has impacted reducing the scope of this practice in the Serbian labor market.

Keywords: COVID-19, employees, informality, multiple job-holding, Serbia.

JEL Classification: J21, J22, J31, J38, O17.

1. INTRODUCTION

Serbia is a South-Eastern European country that experienced many difficulties in building market economy institutions. Even though former communist Yugoslavia developed the unique system of workers' self-management and the private sector existed in some forms of small privately-owned shops and farms, which provided craft services and produced food, Serbia inherited an inadaptable economy structure from the old system (Vodopivec 1993). The first attempt to change the economic

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system occurred in the second half of the 1980s when the first law on privatization of socially-owned companies was introduced. However, the disintegration of Yugoslavia that induced wars among the nations of the former country disrupted the process of economic system changes and put political issues in the first place. After the decade of economic destruction, profound economic changes started at the beginning of the 2000s. Some economic indicators can describe the extent of the devastation of the national economy. Almost a third of the labor force was unemployed or underemployed (Dinkić and Ognjenović 2003). In addition, the poverty rate accounted for over one-fifth of the population (Vukmirović and Smith Govoni 2008), while the poverty gap estimated for the households with at least one unemployed member reached 25 percent (Dinkić and Ognjenović 2003). By intensification of privatization, the employment rates eroded as well. The government adopted the employment policy measures but their effects on the employment increase were relatively weak (Ognjenović 2007; Ognjenović and Branković 2012). It seems reasonable that "moonlighting" was one of the alternatives among the basic survival strategies, keeping in mind that many employees lost their formal jobs and experienced paid leaves or unpaid wages. In such circumstances, the informal sector provided employment opportunities for many workers either in Serbia or in other countries of the former Yugoslavia (Krstić and Sanfey 2007), the former Soviet Union (Foley 1997) and other post-communist countries of the Central and Eastern Europe (OECD 2008). Even before the COVID-19 pandemic, the size of the informal sector in Serbia was sizable. The shadow economy as a percentage of the gross domestic product was 30.1 percent (Schneider et al. 2015), while informal employment stood at a rate near 20 percent for years (ILO 2022).

In this chapter, we observe the economic behavior of employees in Serbia who sometimes decided to take on second in addition to their main job. The data we use to analyze multiple job-holding comes from the 2007 Living standards measurement survey that allows for the distinction between the formal and informal sector of additional employment. Our empirical results are based on the standard theoretical concept of static labor supply (Shisko and Rostker 1976) and obtained using econometric methods for the sample selection models (Lee 1978; Heckman 1979).

According to the data used in this chapter, the multiple job-holding rate in Serbia was around 10.4 percent in 2007. The Labor force survey data estimated the rate of multiple job-holding at 8.7 percent in 2004. The same survey estimated the rate of multiple job-holding at 9 percent in 1997 for the Federal Republic of Yugoslavia, as Reilly and Krstić (2003) reported. To study the phenomenon of multiple job-holding in the Federal Republic of Yugoslavia, the same authors used an especially tailored survey that estimated a very high rate of nearly 30 percent, comparable to the same

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rates of developing countries. Foley (1997) estimated the 10.1 percent rate of multiple job-holding in Russia in 1996, while Guariglia and Kim (2001) obtained a somewhat higher rate of 11 percent. The example of the United States shows that around 20 percent of the employed men and 12 percent of the employed women have experience with second job-holding yearly (Paxson and Sicherman 1996). According to the same authors, more than half of the employed men have experienced moonlighting sometime during their careers. In general, we cannot conclude precisely if the rate of multiple job-holding in Serbia is increasing or decreasing, but it stands at a significant portion of wage earners. Due to the data scarcity, we cannot further divide the subsample of employees by gender, but some other data show that men are more likely to moonlight than women (Paxson and Sicherman 1996; Foley 1997; Preston and Wright 2020).

In what follows, we compare the size of the informal economy in Serbia and other observed countries and describe regulation in the area of labor relations. Section three deals with the methodological concepts used in this chapter. This section describes the methods and data used and analyses the results of empirical research on multiple job-holding and informality in Serbia. Section four gives an overview of the relationship between the pandemic and multiple job-holding. The last section provides some general conclusions.

2. THE INFORMAL SECTOR IN SERBIA

The informal economy can be defined as a parallel economic system that encompasses "all currently unregistered economic activities that contribute to the officially calculated gross national product" (Schneider 2005: 599). On the one hand, many researchers agree that the shadow or hidden economy negatively affects economic growth and poverty, permanently contributing to the deterioration of all other economic and social development indicators, particularly in developing and transition countries (Pfaller 2002; Eilat and Zinnes 2002; Marinković 2004). On the other hand, the same authors include informal sector activities into the survival strategies giving the mining "entrepreneurs" to those who participate in such activities (Pfaller 2002: 219). According to the same author, they "operate in the markets with no protection". Marinković (2004: 9) makes a difference between the usual motives for the participation in the shadow economy and the motives of the participants who are already employed in the formal sector but use informal activities as survival options due to unpaid or low wages on their main jobs. Schneider and Enste (2000) and Schneider (2005) provide a valuable literature survey on the shadow economy for both developed and developing and transition countries. Andrews et al. (2011) pointed out the problem of the measurement of the informal sector in general and to a wide range of definitions used throughout the research

studies. The authors conclude that the main problem is that the empirical results are based on unreliable data that suffer primarily from measurement issues.

A significant portion of all economic activities has been performed out of the formal sector worldwide. At the beginning of the 1990s, the size of the shadow economy was around 35 percent of the gross domestic product for the Western Balkan region on average. This share increased in the mid-1990s, reaching almost half of the gross domestic product value for the same region. These estimates are obtained using different analytical methods. They include only three Western Balkan countries: Bulgaria, Macedonia, and Romania; the shadow economy in Croatia and Slovenia was estimated at one-third.

The survey of the estimates obtained by using several methodological approaches is provided by Eilat and Zinnes (2002: 1241). A similar survey of the results that include the Federal Republic of Yugoslavia (Serbia and Montenegro) give an estimate of the size of the shadow economy of almost 30 percent calculated as an average for the years 1999 and 2000 (Schneider 2005: 610). In Bosnia and Herzegovina, and Croatia, the shadow economy exceeded one-third of the official value of the gross domestic product, while it was around 27 percent in Slovenia. An unweighted average over 21 OECD countries for the same period was 16.8 percent (Schneider 2005: 611). The shadow economy is persistent in Serbia as well. The rate declined from 33.2 percent to 30.1 percent of the gross domestic product from 2001 to 2010 (Schneider et al. 2015). Given the complexity of calculating the size of the informal economy, unfortunately, there are no data for Serbia during the pandemic.

A large part of all analyses of the informal sector is devoted to informal employment. The increase of informal sector employment was the characteristic of the developing and transition countries as well as developed OECD economies during the 1990s. The increasing trend of informal employment in European OECD countries was contributed to by illegal immigrants and those who participated in second informal jobs (Schneider 2012). These trends continue in the 2000s. In 2006, the highest shares of workers, not covered by an employment contract, were found for Turkey, Ireland, Greece, and Israel, respectively, 44, 39, 39 and 38 percent. In contrast, the lowest shares are estimated for Finland and Sweden, one and two percent, respectively, and two former transition countries, Czech and Slovak Republics, two and three percent (Schneider 2012: 54).

Temporary employees are more frequently at risk of informal employment. As the Labor force survey data for Serbia show, the portion of temporary employees and other employees engaged in occasional jobs in 2004 exceeded 14 percent. In 2007, the share of those employees decreased to 11 percent. The decrease in temporary

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employment was probably induced by changes in the labor code that emerged in 2005 and further in 2014. The 2005 labor code constrained fixed-term contracts to a significantly shorter one-year duration than the 2001 labor code, which allowed for three years period of fixed-term employment contracts. The 2014 labor code extended fixed-term employment duration to a maximum of two years. According to the most recent Labor force survey data, the share of temporary employees in the total number of employees was 20.4 percent in 2020 (Eurostat 2022). Comparing this number with the rates from the previous two years of 22.6 percent (2019) and 22.9 percent (2018) it can be concluded that the pandemic (and changed methodology of the survey in 2020) have a diverse effect on this practice in the Serbian labor market. Similar trends characterize the European labor market as well (Eurostat 2022).

Employment in the informal sector stood at a very high level at the beginning of the economic transition in Serbia. According to the Living standards measurement survey data, the informal sector in 2002 encompasses almost one-third of the employed in Serbia. This share even increased in 2007 and remained at 35 percent (Vukmirović and Smith Govoni 2008: 121). However, the 2012 Labor force survey data estimated the share of the informal sector in the total employment at around 17.5 percent. Even if the informal sector in both surveys includes employees and self-employed, farmers, and unpaid family workers, those data are not fully comparable. We cannot conclude that informal sector employment follows a downward trend in Serbia based on these data. Besides the differences in the methodology, the differences in findings can be partly explained by the fact that the respondents may be reluctant to provide information on informal sector activities, as Reilly and Krstić (2003) argued. Informal employment in Serbia has been maintained reasonably high throughout the years. Labor force survey data show a rate of 18.7 percent in 2019, which is somewhat lower without agriculture, accounting for 13.2 percent (ILO 2022).

The labor code prohibits the informal status of employees introducing the penalties for the employer's intentions to derogate employee's rights, including work with no legal (registered) employment contracts and exclusion from compulsory social insurance coverage. The monetary penalty the companies have to pay for every unregistered employee ranges between eight hundred thousand and two million Serbian dinars (or between seven and seventeen thousand euros). In addition, the entrepreneurs (private owners of small and medium-sized firms) are punished by a monetary penalty between three and five hundred thousand Serbian dinars (or between two and a half and over four thousand euros) for the same violation. These penalties are not negligible for either companies or entrepreneurs, considering that the average net wage in Serbia is around five hundred euros and that the minimum

wage exceeds 50 percent of this value. The cases of labor inspection actions in that regard are relatively rare, so the monetary penalties are not the most suitable measure in fighting against informal employment.

3. AN EMPIRICAL ANALYSIS OF MULTIPLE JOB-HOLDING IN SERBIA BEFORE THE PANDEMIC

3.1. Theoretical concepts and methods

This chapter's theoretical concepts on multiple job-holding are based on a static labor supply framework (Shisko and Rostker 1976). According to this concept, employees may decide to take on an additional job if their working hours on their main jobs are not sufficient to increase the wage rate that will satisfy their income goals (Shisko and Rostker 1976: 299). Considering the theoretical constructs about the relationship between the actual wage rate from additional and the expected (reservation) wage rate from the main job, employees will opt for the additional job if their actual wage rate exceeds the reservation wage rate on the main job. The decisions of individuals that will lead them to take on main and additional jobs are rather sequential than simultaneous since those who decide to take on additional jobs often do not perform these jobs in the same occupations (Paxson and Sicherman 1996; Foley 1997). In that regard, the main factors determining main jobs are given as exogenous when we intend to explain someone's decisions to take on additional jobs. As we already clarified, we will observe two possibilities of multiple job-holding by dividing the additional employment sectors into formal and informal ones. Other researchers adopt similar concepts through theoretical backgrounds of their studies for some other transition countries (Foley 1997; Guariglia and Kim 2001) and for the Federal Republic of Yugoslavia (Serbia and Montenegro) (Reilly and Krstić 2003). In addition, Bedi (1998) examined the phenomenon of multiple job-holding in Poland by observing the economic behavior of employees through the two main ownership sectors, the public and private one, assuming that public sector jobs are always in the formal sector.

It is also worth mentioning that the dynamic approach in studying the economics of multiple job-holding is relatively rare, particularly for transition countries, probably due to the scarcity of representative data from panel surveys. One of the first academic s that employ the dynamic concept of labor supply in studying multiple job-holding is provided by Paxson and Sicherman (1996) for the United States economy. They extended the theoretical concepts of multiple job-holding by introducing the models of job mobility. They observed cases when employees do not take on second jobs but instead move to other main jobs that will allow for more flexibility in using working hours, and when they decide to take on second jobs in

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addition to their main jobs. This concept of multiple job- holding will not be observed in this chapter.

In what follows, we will present the econometric models of wage rate determination and the choice of additional jobs as separate equations rather than the sample selection model. The standard approach in determining the wage equation is using the framework of investment in human capital (Mincer 1958; Becker 1962; Ben-Porath 1967). This approach implies that the life-cycle wage pattern is determined by the personal and human capital characteristics, as well as by job characteristics and some other observed factors. The wage equations are as follows:

$$w_{ji} = \beta_j x_{ji} + \gamma_j z_{ji} + \vartheta_{ji}, j=1,2,3, i=1, \dots, N, \quad (1)$$

where w_{ji} denotes the natural logarithms of wage rates, β_j and γ_j are the vectors of unknown parameters of individual-specific variables, job-specific variables, and other explanatory variables, whereas v_{ji} is the error term. The subscript j denotes the choice of additional employment, including formal and informal jobs. The estimates of equation (1) will be used to construct the offered wage for all employees.

The problem of wage determination at additional jobs arises because equation (1) can be estimated only for those individuals who reported wages and hours worked. This implies the usual problem of sample selection bias (Heckman 1979).

The trichotomous logit model will explain the sectoral choice of those who opt for multiple job-holding. We assume that employees may decide not to choose additional jobs ($j=1$), to choose additional jobs in the formal sector ($j=2$), and to choose additional jobs in the informal sector ($j=3$). The standard trichotomous logit model of the following form estimates the probability that an employee opts for one of the choices as mentioned above (Wooldridge 2006):

$$P(y_i = j | q_i) = \exp(\alpha_j q_i) / [1 + \sum_j \exp(\alpha_j q_i)], j=1,2,3, i=1, \dots, N. \quad (2)$$

In equation (2), q_i is the set of independent variables affecting the choice of the sector of additional employment, whereas α_j denotes the vector of unknown parameters for choice j .

The approaches developed by Lee (1978) and Dubin and McFadden (1984) are recently used to estimate the unknown parameters of the wage equation (1) when the trichotomous logit model (2) is used as a tool for solving the selection bias problem. However, the results of the Monte Carlo experiments practiced by Bourguignon et al. (2007) show that researchers need to be cautious when they assume that the

multinomial logit model represents the actual choice of an individual due to the assumption of independence of irrelevant alternatives. They adopted several estimation procedures that relax assumptions about the covariance structure of the error. In addition, the results of the experiment suggest that the approach based on the Durbin and McFadden (1984) method performs better than the approach developed by Lee (1978) when the samples are small, and the number of alternatives is large. The identification of the unknown parameters in sample selection models will be attained by exclusion restrictions validation (Heckman 1979).

3.2. The data

The data used in this chapter come from the 2007 Living standards measurement survey that was conducted by the Statistical Office of the Republic of Serbia (2007). The survey contains a set of data representative at both household and individual levels. The World Bank provided the questionnaires design and the definitions of variables and data collection. Our data include 4,821 wage earners, out of which 502 are multiple jobholders; 191 of them found the second job in the formal sector, whereas 311 are engaged in informal sector activities. The survey data do not distinguish between one, two and more additional jobs, so we will observe all those employees who reported additional employment as a subsample of second jobholders. An extended definition of the employed in the informal sector, used in this chapter, encompasses all those not contracted by a registered company, those who have no own legitimate business, or those not covered by social security insurance but eligible according to the provisions of the labor regulation (Vukmirović and Smith Govoni 2008: 121).

Besides data on wages earned at main and additional jobs, the survey also provides data on hours worked, allowing for the calculation of wage rates. The wage rates are then transformed by using the natural logarithms. The data set contains information on the wage rates greater than zero for 4,052 wage earners who hold the main job, and 91 and 101 employees who hold the second formal and informal job, respectively. Based on these data, the unconditional wage rate on the main job is estimated at 193.16 Serbian dinars (or 2.40 euros) in comparison to 163.61 dinars (2.03 euros) on the second informal and 342.73 dinars (4.26 euros) on the second formal job, respectively. This implies the unconditional wage ratio between the main and second informal job of 0.8, on the one hand, and 1.8 between the main and second formal job, on the other hand. Because the survey data divide formal from informal second jobs, we use this information for the creation of two subsamples of multiple jobholders. Thus, we ignored the assumption that all multiple jobholders perform their second jobs in the informal sector, as presented in other research studies (Foley 1997; Guariglia and Kim 2001; Reilly and Krstić 2003).

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As our data report, almost 76 percent of multiple jobholders perform their second jobs in occupations different from those in main employment. Those who most frequently take on second jobs in the same profession belong to the occupational groups of professionals, technicians, associate professionals, craft and related trades workers, and elementary occupations. The rate of multiple job-holding outside of the main occupation is pretty high in Russia, exceeding 87 percent (Foley 1997: 18). In the United States, the rates are 83 percent for men and 77 percent for women (Paxson and Sicherman 1996: 364-368). Despite the difference in the observed periods, these rates are comparable with our findings. As Paxson and Sicherman (1996) show, the same occupations in the subsample of men who most frequently moonlight are professionals of natural sciences, mathematical and computer sciences and health occupations, and protective service and food service occupations. In the subsample of women, dominant careers include professionals and technicians, health service occupations, and building cleaning services jobs. Foley (1997) found the highest rates of multiple job-holding in the same profession among managerial and professional careers, such as life science and health professionals, physical, mathematical, and engineering science professionals, and teaching professionals. Those results pointed out similarities and flexibility among occupations regardless of the achieved level of economic development. However, the motives for the participation in additional employment are different. Employees of the Serbian firms search for additional jobs due prevalently to existential reasons. As the Living standards measurement survey data indicates, more than half of those with other work do this because of basic survival. This motive is followed by a quarter of those who opt for a second job to improve their living standards.

3.3. Estimation results

Table 1 reports the maximum likelihood estimates of the logit models specified separately for multiple job-holding in the formal and informal sector in Serbia. We started with more parsimonious models and then extended the initial models by adding more predictors. The estimates of the sample selection model that are based on the trichotomous logit model of sectoral choice are not reported in this chapter due to brevity. Based on the estimates of sample selection models, the second job wages earned in both formal and informal sectors are imputed for all employees. Following instruments (that are excluded from the wage equations) are used for identification: a categorical variable marital status, a continuous variable non-labor income composed of the public social transfers and pensions, as well as a categorical variable that approximates the economic position of an employee, constructed as the percentile distribution of total consumption. The same instruments and a set of exogenous variables that are initially added to the wage equations are included in the

logit models separately estimated by the sector of additional employment. The set of identifying variables in both logit models of second job-holding, representing the formal and informal sector, are jointly significant at the one and five percent level, respectively, as shown by chi-square statistics of 36.6 ($p < 0.001$) and 13.78 ($p < 0.03$). The reference individual in the logit model of multiple job-holding, for both the formal and informal sector, is a full-time employee in a small-sized firm, with a three-year secondary vocational education, who lives in the region of Šumadija and Western Serbia, and represents the top percentile of the distribution of total consumption. In what follows, we will interpret the estimation results of the two logit models separately.

Table 1. Maximum likelihood estimates of logit models of multiple job-holding (formal vs. informal sector choice)

Variable	Formal second job		Informal second job	
	Log odds (Std. err.)	Marginal effects	Log odds (Std. err.)	Marginal effects
Male	2.374*** (0.464)	0.021***	1.266 (0.215)	0.009
Married	1.223 (0.269)	0.005	1.121 (0.197)	0.004
Age	4.026*** (2.806)	0.035***	17.965*** (10.4771)	0.106***
Age squared	0.854** (0.069)	-0.003***	0.726*** (0.050)	-0.012***
<i>Education</i>				
No education	1.651 (1.104)	0.016	0.404* (0.219)	-0.023***
Primary	0.689 (0.214)	-0.008	2.521*** (0.559)	0.047***
3-year vocational	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
4-year vocational	1.298 (0.399)	0.007	1.749*** (0.357)	0.022***
Gymnasium	0.655 (0.424)	-0.008	1.362 (0.884)	0.013
Post-secondary non-university	1.699 (0.668)	0.016	1.831 (0.815)	0.028
University	2.703** (1.360)	0.037	1.311 (0.625)	0.011
<i>Region</i>				
Belgrade	1.083 (0.291)	0.002	2.236*** (0.718)	0.038**
Vojvodina	1.332 (0.303)	0.008	2.014*** (0.316)	0.031***

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Variable	Formal second job		Informal second job	
	Log odds (Std. err.)	Marginal effects	Log odds (Std. err.)	Marginal effects
Šumadija and Western Serbia	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
Southern and Eastern Serbia	1.329 (0.293)	0.008	0.359*** (0.070)	-0.031***
<i>Firm size, main job</i>				
Micro firm	1.557** (0.351)	0.011**	0.704*** (0.114)	-0.013***
Small-sized	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
Medium-sized	1.809*** (0.475)	0.018**	1.034 (0.212)	0.001
Large-sized	0.835 (0.333)	-0.004	0.521*** (0.145)	-0.019***
<i>Economic status</i>				
Percentile, first	0.195*** (0.065)	-0.026***	0.494*** (0.120)	-0.021***
Percentile, second	0.451*** (0.111)	-0.016***	0.557*** (0.119)	-0.018***
Percentile, third	0.560** (0.131)	-0.013***	0.546*** (0.118)	-0.019***
Percentile, fourth	0.585** (0.132)	-0.012***	0.763 (0.158)	-0.009
Percentile, fifth	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
Non-labor income, transfers	0.956 (0.053)	-0.001	0.979 (0.037)	-0.0008
Predicted second job wage	0.679*** (0.070)	-0.010***	0.212*** (0.041)	-0.057***
Actual main job wage	0.777** (0.110)	-0.006**	0.682*** (0.071)	-0.014***
Main job hours	0.997*** (0.001)	-0.0001***	0.999*** (0.001)	-0.00004***
Main job occupation	Yes	yes	Yes	Yes
Main job business sector	Yes	yes	Yes	Yes
Log-likelihood	-615.43		-851.53	
Pseudo-R squared	0.1036		0.1485	
Chi-squared	154.02 (0.00)		286.70 (0.00)	
N	4,052		4,052	

Notes: ***, **, * indicate the 1%, 5% and 10% level of significance, two-tailed test. Robust standard errors are provided in parentheses. The dependent variable, multiple job-holding=1 if an employee has >one job.

Men are more likely to take on the second job in the formal sector than women. The age of second jobholders in the formal sector follows a concave path and depicts a

strong positive effect on moonlighting. Surprisingly, an employee's marital status and the region of residence do not affect the relative odds of having a formal second job. From our results, it is evident that formal second jobs are more often taken by those employees who have a university degree or even higher educational attainment compared to those who have a three-year secondary vocational education which is the reference category. Formal second jobs are more likely taken by those employees who work in micro and medium-sized firms than in small-sized ones. As measured by the percentile distribution of total consumption, the economic status of employees reduces the relative odds of having a formal second job, as observed throughout all the percentiles of the distribution of consumption compared to the highest level of consumption. This result is unexpected and a sign of the estimated marginal effects, implying that the attained level of personal consumption forms a negative relationship with someone's willingness to participate in additional formal employment. This is in line with the finding that the public transfers, including social assistance and pensions, also reduce the propensity to moonlighting in the formal sector. Yet, the estimated effect is not statistically significant at the conventional levels. As expected from the theory of labor supply, higher wages and hours worked at the main job reduce someone's willingness to moonlight. However, the unexpected result is that the expected wages in the formal second job reduce the relative odds. This is probably due to the small sample of employees engaged in the second formal job, and because certain categories of employees are underrepresented, further implying that the second job wages are imputed based on the constrained number of observations.

There are substantial differences among multiple jobholders when observing informal sector participation. Gender doesn't have an essential role in multiple job-holding, while age strongly supports the relative odds. There are no second jobs for those without formal education, whereas the informal sector most likely provides engagements to those with primary and four-year secondary vocational education. These results indicate that the informal sector most likely offers low-paid complementary jobs to those who are not high skilled professionals.

This conclusion supports our assumption that participating in additional employment in the informal sector is closely related to basic survival. Like in the case of the participation in other jobs in the formal sector, belonging to the bottom percentiles of the distribution of total consumption reduces the relative odds of multiple job-holding in the informal sector compared to the top percentiles. This result does not fully support our assumption on the motives for participating in the informal sector; neither do decreasing effects of the expected second job wages. This problem requires further research and can be partly explained by reasons like the ones described in the previous paragraph.

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As reported in several research studies, educational attainment has diverse effects on the probability of multiple job-holding. Using the probit analysis, Foley (1997) estimated positive marginal effects of the educational attainment on the probability of second job-holding at all education levels for an early period of transitional changes in Russia. The impact of these effects increases along with the education level. Having a university education doubles the probability of second job-holding, relative to those who do not have a higher education degree for both men and women. Opposite to this result, Gërzhani and van de Werfhorst (2013) found a negative relationship between educational attainment and informal sector participation for Albanian wage earners, in general. However, when examining multiple jobholders only, the adverse effects of education on informal sector participation are diminishing and tend towards zero. Reilly and Krstić (2003) found similar results for the Federal Republic of Yugoslavia (Serbia and Montenegro), showing that low-skilled employees have a high probability of holding more than one job.

3.4. Implications

The results of the estimated logit models support our previous knowledge about the occupational groups that are most likely engaged in additional employment across the sectors of multiple job-holding. The complexity of jobs performed by an occupational group is closely related to education. This implies that the conclusions about occupational participation can also explain the propensity to moonlight by educational attainment. As the marginal effects in Table 2 illustrate, one can notice the diverse influence on the relative odds of multiple job-holding contributed to by occupational groups. In the left column of Table 2, which represents those who participate in formal second jobs, the marginal effects are increasing along with the complexity of occupational groups, whereas the opposite is true for those who participate in informal second jobs as shown in the right column of the same table. However, an interesting finding is that the occupational group of legislators, senior officials, and managers provides some space for participating in additional employment in both sectors. High-skilled professionals are amongst those who most likely increase the relative odds of formal sector participation. In contrast, occupational groups such as service workers, shop and market sales workers, craft and related trades workers, and elementary occupations dominate amongst those most likely engaged in informal second jobs. It is still true that the formal sector rewards multiple jobholders with a higher premium than the informal sector. The complexity of jobs can explain the difference in rewards between the sectors. However, we cannot conclude that some other possible reasons may be related to the tax exclusion because we analyzed wages before taxes.

Table 2: Predicted probabilities of multiple job-holding by selected occupational group

Occupational group	Formal second job	Informal second job
Legislators, senior officials and directors – managers	0.0449	0.0433
Professionals	0.0543	0.0334
Technicians and associate professionals	0.0260	0.0382
Service workers and shop and market sales workers	0.0322	0.0610
Craft and related trades workers	0.0298	0.0512
Elementary occupations	0.0273	0.0494

Notes: All other predictors are set at their means. Predicted probabilities are calculated from the logit estimates reported in Table 1.

4. INFLUENCE OF THE PANDEMIC ON MULTIPLE JOB-HOLDING

Trends in the European countries' labor markets reveal a somewhat changed path of the multiple job-holding during the last several years. The incidence of second-job holding is relatively lower in European countries than, for example, in the US. While total employment grew, the number of employees with a second job also increased. The pandemic seems to have slowed not only total employment but also the possibility of holding more than one job simultaneously. It can be relatively easily explained by the fact that some industries substantially reduced their business activities, so the number of jobs decreased too. The analysis of Rho and Fremstad (2020) illustrated by the Current population survey data indicated an upward trend in the number of those who worked on more jobs before the pandemic. Hirsch et al. (2016) draw similar conclusions, pointing to an acyclic nature of multiple job-holding in the US. The rate of multiple job-holding in the US economy in 2019 was around 5 percent of the total employment, while in 2020, it fell to 4.3 percent. The authors also argue that these rates are somewhat restrictive because they do not include self-employed, those who have their own contracts with the companies, or those engaged in the informal sector. Some other research shows that this rate ranges up to 10 percent. Similarly, the share of persons having a second job on the European labor market decreased in 2020 compared to 2018 and 2019, when it was on a mild increase. Speaking in numbers, the rates of multiple job-holding were 4.1 and 4.2 percent before the pandemic, whereas in 2020, it decreased to 3.9 percent (Eurostat 2022). These percentages refer to the working-age population. The decline of the economy would probably be more severe if the European Union had not created policies intended to mitigate the effects of the health crises on the European enterprises and citizens (Eurofound 2022).

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Regarding the Serbian labor market, the informal sector most likely offers low-paid complementary jobs, whereas the formal sector attracts those who belong to high-skilled occupational groups. The highest incidence of multiple job-holding in EU-27 characterizes professionals and similar high-skilled occupations (28 percent), while the same rate among elementary occupations doesn't exceed 10 percent (Eurofound 2020). Men are more often represented among craft and related trade workers and managers. At the same time, women more often choose second jobs in the group of elementary occupations or service and sales workers. An analysis of recent data for Serbia would likely show that in addition to helping improve the material status of those holding multiple jobs, the number of high-paid secondary jobs is also emerging in the growing industrial and services sectors. As multiple job-holding increases with the growth of total employment, it may be expected that the pandemic has impacted reducing the scope of this practice in the Serbian labor market. The Labor force survey data show similar development in the Serbian second-job market. Although the incidence of multiple job-holding in Serbia is almost twice as in the EU-27, it slowly decreased in 2020 (7.7 percent) compared to 2019 (7.8 percent). Up to 2015 the multiple-job holding rate was 5 percent, changed its path since 2016, and jumped to the level of 7 percent and above (Eurostat 2022).

5. CONCLUSION

This chapter analyzes the propensity to moonlight across the two sectors of multiple job-holding in a transition economy. We concluded that the informal sector most likely offers low-paid complementary jobs, whereas the formal sector attracts those who belong to the high-skilled occupational groups. This further indicates that the reasons for participating in additional employment in the informal sector are closely related to basic survival. The main limitations of the estimation results presented in this chapter are small samples of multiple jobholders across observed sectors and the insufficient number of instruments that would better explain someone's decisions about the participation in additional employment, either in the formal or informal sector. The lack of the appropriate instruments-predictors in the selection equation of the sample selection model probably affected incorrect signs of the imputed second job wages in both logit models.

Due to the insufficient number of observations, our sample is not further divided by gender. In such circumstances, the absence of important variables, like household and family characteristics that may significantly predict the propensity to moonlight, certainly mitigated the estimated models' predictions. However, some recent research for developed economies shows that women have lower incidence of multiple job-holding than men (Conen and de Beer 2021). The male-female gap in hours worked on the main job substantially reduces women's propensity to have a

second job (Preston and Wright 2020). Also, it seems reasonable that the rise of multiple jobholders follows the increase in total employment, as EU Labor survey data documented (Eurostat 2022). This implies that during the economic downturn, for example, triggered by a pandemic, an opposite trend may occur. For example, Rho and Fremstad (2020) found the pandemic, as a global phenomenon, caused a fall in the number of multiple jobholders in the US labor market. Similar paths are revealed for the European labor markets (Eurostat 2022).

As a form of atypical employment, multiple job-holding will be in the focus of institutions responsible for implementing the new Employment Strategy in Serbia (Government of the Republic of Serbia 2021). In addition to the survival strategy for many participants in the labor market, multiple job-holding gets another dimension, especially in developed countries, serving as an instrument for improving skills, facilitating the transition to another job, or changing career for those who practice this form of employment (Panos et al. 2014).

ACKNOWLEDGEMENT

This research is financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

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