

Unregistered Micro-Performers of Business Activity: The “Who” and “Why” in North Macedonia

Marjan Petreski

University American College Skopje, North Macedonia
marjan.petreski@uacs.edu.mk

Blagica Petreski

Finance Think – Economic Research & Policy Institute, Skopje,
North Macedonia
Blagica.petreski@financethink.mk

CroEconSur

Vol. 24

No. 2

December 2022

pp. 45-77

Received: July 27, 2022

Accepted: September 29, 2022

Research Article

doi:10.15179/ces.24.2.2



Abstract

The purpose of this paper is to understand who the unregistered micro-performers of business activity (MPBA) in North Macedonia are and why they decided to stay informal. We rely on a specifically designed Survey on Unregistered Micro-Enterprises collected from 151 unregistered MPBAs in May 2022. Results reveal that most common forms of unregistered MPBAs include: street sellers, individual farmers, handicraftsmen, providers of personal beauty services, painters, plasterers, bakers, lessons instructors, motor vehicle mechanics and housekeepers and cleaners. Costs of becoming a registered company, particularly taxes, social contributions, parafiscal charges and the cost for accounting, have been identified as an important impediment to registration. On the other hand, access to bigger customers, to more reliable sellers of inputs and to new markets

have been identified as large benefits of formalization. The second motivation is the access to social protection and pension in the old age. Costs of staying informal have limited power in motivating registration.

Keywords: unregistered micro-performers of business activity; costs of formalization; benefits from formalization; costs of staying informal; North Macedonia

JEL classification: E26

1 Introduction

The prevalence of informality in the emerging and developing countries attracted the attention of researchers who explored the reasons why firms and employees stay in the informal sector. Informal sector accounts for about one third of GDP and informal employment amounts to 70 percent of total employment in these countries (Elgin et al., 2021). While an abundance of research attempts to define and measure informality (e.g., Elgin et al., 2021; Schneider & Enste, 2000; Ulysea, 2020), the concept of informality requires a clear definition in order for the causes and consequences of it to be thoroughly examined. Ulysea (2018) adopts the legalistic definition of informality which considers firms and employees operating at the margins of relevant laws and regulations informal, and distinguishes between two margins of informality: (1) extensive margin – when firms register and pay entrance fees to become formal; and (2) intensive margin – when formal firms hire employees without a formal contract. The focus of this research is on the extensive margin, particularly on the reasons why firms prefer to stay unregistered and informal. Since such economic operators are usually small and even reduced to a single employee, the term used throughout the study is ‘micro-performers of business activity’ and its acronym is MPBA.

The government of North Macedonia has assigned strategic priority to the reduction of informal economy. This was primarily demonstrated through the

The aim of this paper is to understand the reasons why unregistered MPBAs in North Macedonia stay informal. To meet the objective, this study relies on data collected through the Survey on Unregistered Micro-Enterprises (SUME), which included questions about the costs of formalization, benefits from formalization and costs of staying informal, and was conducted on 151 unregistered MPBAs. As SUME was conducted only on the target MPBAs, its objective is not to inform about the size of the problem, but rather to address the problem and provide answers about the reasons for certain behavior of the target population. SUME was conducted in May 2022 through a computer-assisted telephone interview (CATI). Survey data were complemented with interview data from registered MPBAs which were subsequently collected in June 2022. The collected data are analyzed through descriptive and factor analysis.

The paper makes several contributions to the current gap in research. First, the paper presents a detailed examination of the reasons for being informal and motives that could potentially encourage formalization of MPBAs, for the first time for the region of the Western Balkans. Second, the paper describes the usual forms of MPBAs, rarely described in other studies which usually treat the informal economy as a whole. Third, by focusing on the underlying factors of informality, the paper upgrades the analysis from purely descriptive to one that could provide deeper insights into the significance/weights of the costs and benefits of formalization.

The rest of the paper is organized as follows: section 2 briefly places the discussion within the relevant literature. Section 3 makes a more detailed overview of SUME. Section 4 presents the results from the descriptive analysis, while section 5 presents the results from factor analysis. Section 6 concludes by offering recommendations for policy interventions.

2 Literature Review: What Causes Firms to Become or Stay Informal?

Governments' efforts to formalize small firms provide various benefits. First, formalization broadens the tax base. Second, firms can bid on government contracts, have access to formal financial services and can become exporters. Third, formalization creates the sense of the rule of law. And, finally, the registration of firms enables governments to understand the structure of their economies (Campos et al., 2018). However, despite formalization attempts and reforms, many firms in developing countries remain informal (Bruhn & McKenzie, 2014). There are two main schools of thought about why firms remain informal. The first relates to costly regulations and bureaucracy as the main reason why firms stay out of the government's sight (e.g., de Soto, 1989). The costs of formalization are high enough to nullify the productivity gains of formalization, hence firms decide to remain informal. Thus, reducing legal and regulatory obstacles should motivate informal firms to become formal. The second school of thought relates to the dual perspective, i.e., parallel co-existence of fundamentally different groups, formal and informal firms, where the formal firms are led by educated entrepreneurs who pay taxes, raise capital and access public goods to expand their businesses, while the informal firms are small, unproductive and stagnant (e.g., La Porta & Shleifer, 2014). Thus, improved productivity and development of formal firms decrease the importance of the informal sector in the economy.

Theoretically, firms weigh the costs and benefits of becoming (e.g., paying registration fees) and staying formal (e.g., paying taxes and recurrent administrative costs); and vice versa, the costs and benefits of becoming and staying informal (e.g., being discovered and punished by government inspectors) (Ulysea, 2020). In some cases, the weighing of costs and benefits of formalization mirrors the weighing of costs and benefits of remaining informal and it is difficult to classify the importance of the cost or of the benefit side in examining factors influencing formalization. For instance, the benefit of becoming formal and of having access to the capital markets represents an opportunity cost of remaining

informal. Regardless of the elusive concept, our attempt is to review the existing literature with respect to the three channels of influence: reducing the costs of formalization, increasing the benefits of formalization and increasing the costs of staying informal.

With respect to the costs of formalization, firms decide to remain informal due to the existence of excessive taxes and regulations, the restrictive (and corruptive) regulatory enforcement or the combination of both, mediated by incomplete implementation. The restrictiveness and complexity of regulations and tax systems stimulate informal activity in the economies (Schneider & Enste, 2000). Fortin et al. (1997) show that the rise of payroll taxes, profit taxes and registration/licensing fees stimulate firms to transit to informality. Moreover, Auriol and Warlters (2005) argue that fixed costs of formalization (registration fees) are significantly higher in poorer countries and keep small and poor entrepreneurs away from the formal sector. Similarly, Ulysea (2010) finds that the reduction of the costs of entry into the formal sector raises the formal employment, while Rocha et al. (2018) discover that tax reductions increase the number of formal firms. On the other hand, Piza (2018) finds that tax simplification programs do not affect formalization rates. Besides the legal and regulatory setup, the poor law and regulatory enforcement increase the costs of formal businesses and motivate informal firms to remain informal. Johnson et al. (1998) and Friedman et al. (2000) argue that even though firms are willing to comply with the existing laws and regulations, they prefer to avoid the arbitrary and bureaucratic demands and corruptive behavior of government officials by staying informal. Loayza (1996) and Djankov et al. (2002) state that the restrictive tax and regulatory systems are accompanied by a lack of capability for enforcement or higher levels of corruption stimulating informal economy. Moreover, Williams and Bezeredi (2018) find that the higher the perceived public corruption, the lower the tax morale and the higher acceptability of informality of small entrepreneurs. Dabla-Norris et al. (2008) argue that the regulatory burden may stimulate informality. However, the stronger the rule of law, the weaker the effect.

On another side, informality of firms may arise due to unrecognized or negligible benefits of formalization which particularly relate to the access to public goods and services. In general, limited access to official means of contract enforcement and to capital markets, as well as a lack of information on the benefits from formalization, keep firms in the informal domain. Quintin (2008) emphasizes the role of contract enforcement in relaxing the borrowing constraints of formal firms enabling them to grow and be profitable. Similarly, related research found that improving access to credit for the formal sector reduced the size of the informal one (e.g., Lopez-Martin, 2019).¹ Informal firms may lack information about the registration procedures and costs, as well as about the benefits of becoming formal. De Giorgi and Rahman (2013) found that information campaigns improved the knowledge of informal firms about registration procedures, though they did not stimulate business registration. On the contrary, Benhassine et al. (2018) found that offering information on the potential benefits of formalization, business training and support for opening a business, as well as tax mediation services, stimulated informal firms to formalize, yet formal firms have had no significant gains in terms of increased loans, sales, profits or standards of living.

Finally, firms would be forced to formalize if the costs of staying informal increased, especially with stricter enforcement and higher probability of detection. The reasons why tighter controls and inspections may reduce the size of the informal sector relate to the labor market frictions, low-productivity firms and high tolerance of informality. Meghir et al. (2015) argue that search frictions enable firms to be profitable by posting jobs in both the formal and the informal sector, accounting for the compliance costs (paying fines if caught). Thus, search frictions help low-productivity firms to remain informal and be profitable, while stronger enforcement would cause better allocation of workers towards higher-productivity jobs. In parallel, informal firms are the so-called parasite firms, meaning they earn profits due to cost advantages of not complying with the regulations. Stricter enforcement would drive low-productivity firms out of the market and improve

¹ For more about the role of financial constraints in driving informal activity, see Straub (2005), Catão et al. (2009), De Paula and Scheinkman (2011) and de Mel et al. (2013).

the allocation of resources in the economy (e.g., Ordóñez, 2014; Ulyssea, 2018). Lastly, high tolerance of informality arises from lower tax morale of entrepreneurs and the population, which is in turn driven by weak institutional systems (Littlewood et al., 2020; Williams & Bezeredi, 2018). While increasing the probability of detection may increase the sensitivity of the population to moral and social obligation (de Andrade et al., 2016), forcing compliance with the excessive and inefficient regulation may lead to higher unemployment, resulting in rather higher tolerance of informality (Ulyssea, 2010).

3 Survey on Unregistered Micro-Enterprises (SUME) in North Macedonia

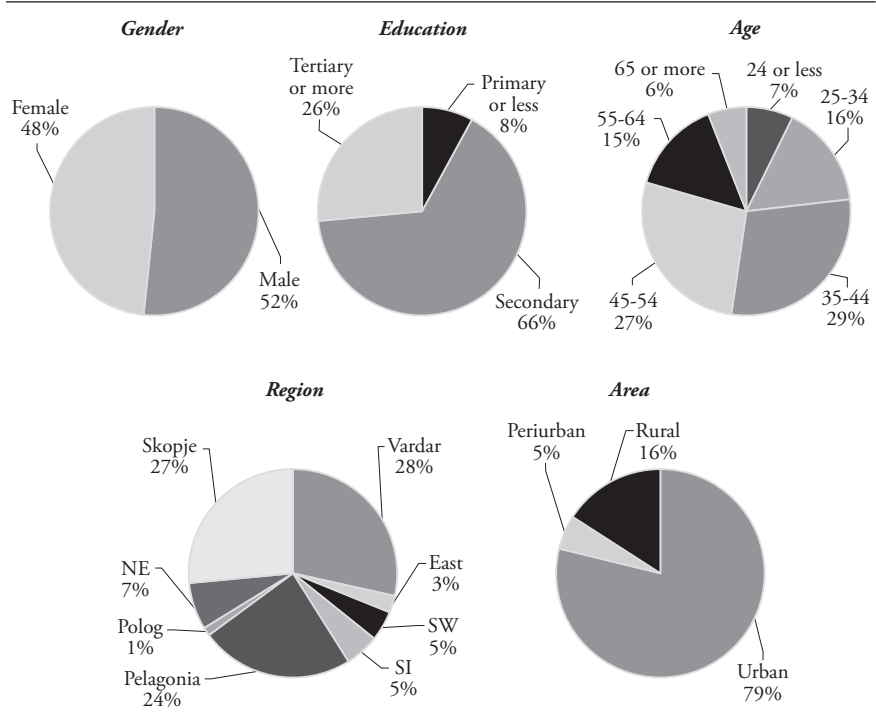
To meet the objective of this policy research, the paper relies on a specially designed survey - SUME. It consists of 70 questions on the actual and perceived costs and benefits of formalization, as well as the cost of staying informal in the country.² SUME aimed only at unregistered MPBAs, i.e., individuals and groups of individuals who performed certain economic activity which was not registered with any of the institutions nor any income from it was declared to relevant authorities. The span of such enterprises is presented in the next section. SUME was conducted on the sample of 151 respondents, all fitting the definition of the survey and all of them contacted, in May 2022, through the method of snow-ball sampling, i.e., one respondent lead to others who similarly performed unregistered business activities.

Such setup of the survey implies at least two things. First, SUME cannot be used to understand the importance/share of the informal economy due to unregistered businesses in the total informal and/or formal economy, but only to investigate the costs and benefits from becoming formal based on the target group of unregistered MPBAs. Second, SUME is not a representative survey as the number of 151 respondents is insufficient to claim representativeness, but it aimed at

² The questionnaire is available at this link: <https://bit.ly/3BUzLUM>.

achieving sufficient heterogeneity to be able to rely on the obtained results in the policy design process.

Figure 1: Sample characteristics



Note: The following abbreviations are used for the regions: SW – Southwest, SI – Southeast, NE – Northeast.
 Source: Authors' calculations based on SUME.

Figure 1 presents the distribution of the sample according to five most prominent characteristics of the respondent and business' area: gender, level of education, age, region and urban/rural settlement. It could be observed that distributions

offer sufficient level of diversity, while some of them mimic the population characteristics and, in this way, secure the level of robustness of the analysis.³

The results of SUME are presented in the following sections through descriptive and factor analysis. These results are complemented by the conclusions from 10 interviews with registered MPBAs, which were collected via telephone in the second half of June 2022, in order to verify, reject, support or further elaborate the survey findings.

4 Descriptive Analysis

4.1 The Face of Informality

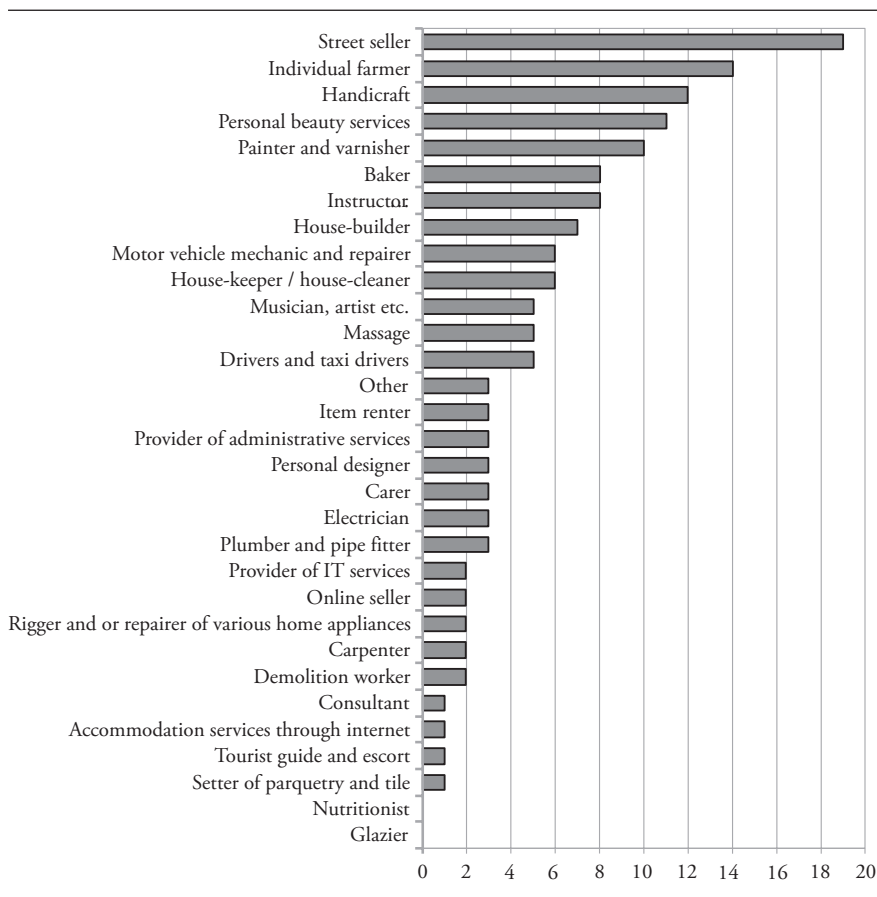
We start the analysis by looking at the facets of informality among unregistered MPBAs. SUME identified 28 business activities with the probability of being informal, through an exhaustive search of the International Standard Classification of Occupations. During the survey, two additional business activities emerged, so that respondents were classified into a total of 30 potentially unregistered business activities. While the survey does not give a precise overview of the weight of each of them, due to their abundance, Figure 2 reveals that unregistered business activities are concentrated in 10 sectors, covering two thirds of all responses, and those are:

- street sellers of food, jewelry, garment, etc.,
- individual farmers,
- handicraftsmen,

³ It should be, however, noted that the available statistics on firms' demographics do not provide information about gender, age and education of the owner/manager, so a direct comparison is not possible. However, some distributions for the general population are as follows: according to the 2021 census, gender distribution of the population was 49.6 percent male and 50.4 percent female respondents; the educational distribution was 33.4 percent of respondents with primary education or less; 47 percent with secondary education; 19.6 percent with tertiary education or more; the age structure was 19.8 percent of respondents aged between 25 and 34; 21.1 percent aged between 35 and 44; 20.8 percent aged between 45 and 54; 20.9 percent aged between 55 and 64. These distributions are approximate to the distributions of the respondents in SUME. Likewise, the national statistics provide for the regional distribution of the active firms with up to nine employees as follows: Vardar - 7.4 percent; East - 7.4 percent; SW - 10.2 percent; SI - 7.9 percent; Pelagonia - 10.8 percent; Polog - 12.0 percent; NE - 5.7 percent; Skopje - 38.7 percent, revealing that our sample slightly underestimates the number of enterprises in Skopje at the expense of those in the Vardar and Pelagonia regions.

- providers of personal beauty services,
- painters and varnishers,
- bakers (of various products like donuts, jams, pastry), including cooks,
- instructors of languages, science, music lessons, etc.,
- house builders of limited extent and plasterers,
- motor vehicle mechanics and repairers,
- housekeepers and housecleaners.

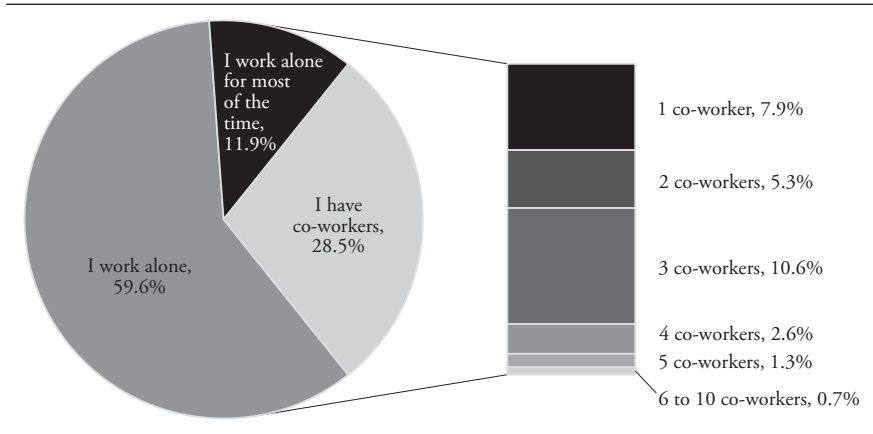
Figure 2: *Types of unregistered MPBAs*



Source: Authors' calculations based on SUME.

73 percent of all MPBAs did not have a bank account. 90 percent reported not obtaining any license or such license was not needed to run the business activity. Out of the rest, most of them (7 percent of the total) reported obtaining a license from a relevant issuer (e.g., a tourist guide license). Figure 3 reveals that in the majority of cases (59.6 percent) the work was performed only by the respondent, while in 11.9 percent of the cases it was performed mostly by the respondent. In less than a third of the cases, a group of co-workers performed the work, with a total of four persons (the respondent plus three co-workers) performing the work in most of the cases (10.6 percent). It is evident that such groups rarely exceed six persons; the option 11 to 19 and 20+ co-workers received no answers. In the cases in which there were co-workers, 84 percent responded that all of them were paid workers. 62.8 percent of co-workers were not family members, while in 30 percent of cases all co-workers were family members.

Figure 3: Number of workers per unregistered MPBA

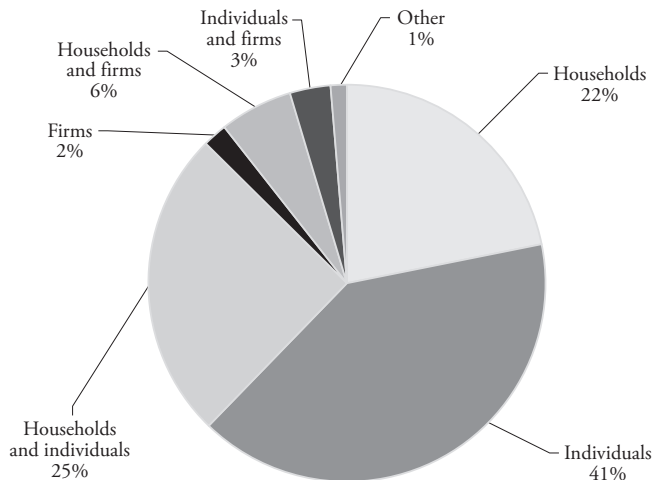


Source: Authors' calculations based on SUME.

Figure 4 reveals that mainly households and individuals are clients of unregistered MPBAs, a total of 87.4 percent of cases. Firms on their own account for only 2 percent. This confirms the expectation that unregistered MPBAs are usually small

and could hardly offer their services to a registered firm due to the informality of their own business.

Figure 4: *Types of clients of unregistered MPBAs*



Source: Authors' calculations based on SUME.

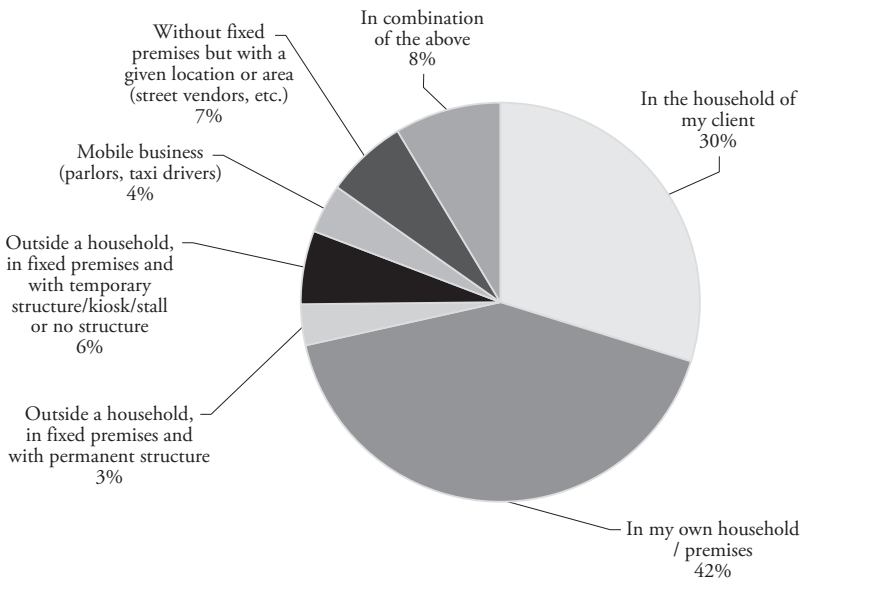
95 percent of all unregistered MPBAs receive their payment in cash, the remaining 5 percent concern cases when payment was made to personal account. The survey response reading ‘through an official invoice issued from my enterprise’ received no answers, confirming the informality of the business activity. Interestingly, in these 5 percent of cases, personal income tax was either not paid, as the transfer from one physical person to another is usually monitored by the authorities, or the tax was paid as a provisional periodical amount (usually applicable to individual farmers).

The annual income they earn further confirms that unregistered MPBAs are small. 86.8 percent of those who reported their annual income (75.5 percent of all MPBAs) earned less than 250.000 Macedonian Denars (MKD), approximately 4.000 EUR, throughout 2021. A share of those who reported the actual income

(not all of them revealed the exact amount) earned on average slightly less than 70.000 MKD (approximately 1.150 EUR) annually. This annual amount is about the size of 2.5 average net monthly salaries in the country, thus very small.

In 41.7 percent of the cases, the unregistered business activity is performed in an own household or premises, while in 29.8 percent of cases in the household of a client (Figure 5). Other options also reflect the types of identified unregistered businesses, e.g., street sellers who usually perform their activity outside the household in permanent or temporary, fixed or mobile structures.

Figure 5: *The space in which unregistered business activity is performed*

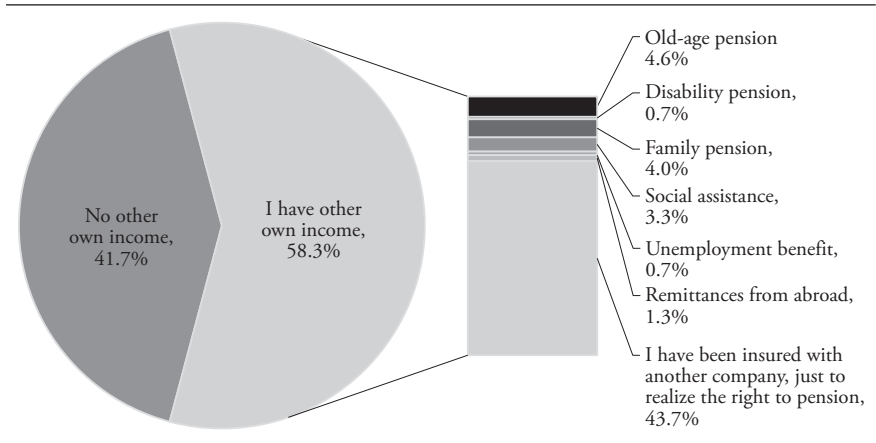


Source: Authors' calculations based on SUME.

58.3 percent of MPBAs have other income except the informal one (Figure 6). The majority of them, 43.7 percent, work elsewhere or are only formally in registered employment in another firm, in order to be able to obtain the right

to receive pension in their old age. Few cases reported receiving welfare benefits, while 41.7 percent of all respondents did not report any other income.

Figure 6: Other income of unregistered businesspersons

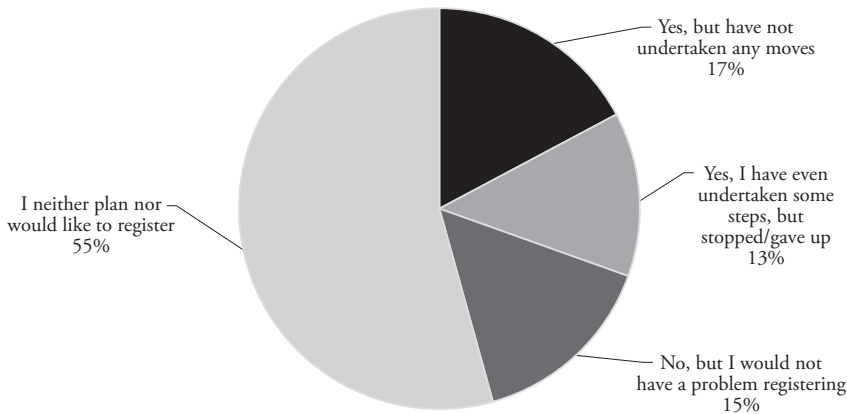


Source: Authors' calculations based on SUME.

4.2 Costs of Formality

55 percent of the respondents have never considered registering nor would like to register their business (Figure 7). However, the share of other responses is not negligible: 17 percent responded that they considered registering their business without making any attempts to do so, 15 percent did not consider registration but would not have a problem with registering, while 13 percent considered registering and had even undertaken specific steps. Thus, the answers show that not registering is not the first choice of respondents but that their considerations related to costs and benefits of formalization and the motives of staying informal should be thoroughly considered.

Figure 7: Plans for registering a business

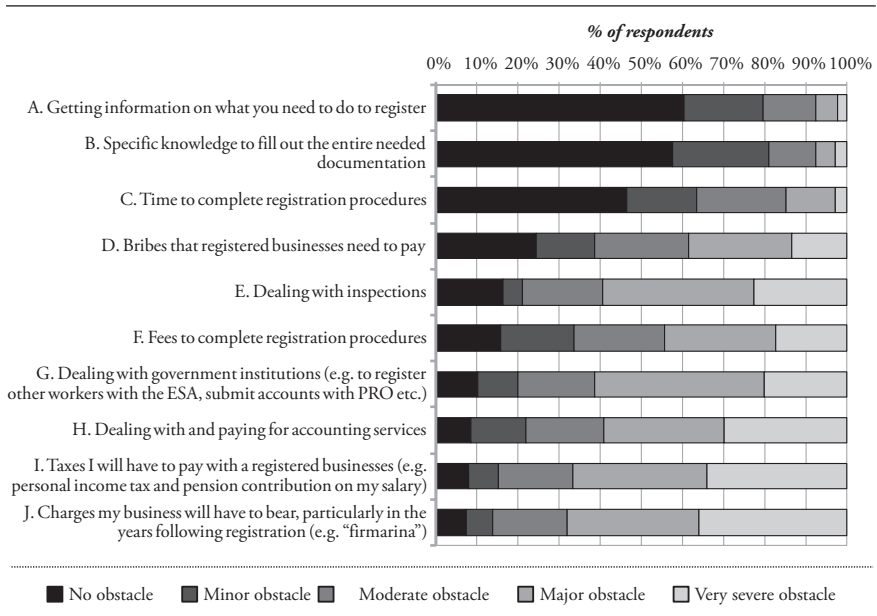


Source: Authors' calculations based on SUME.

We first extract the costs of formalization divided into two parts: obstacles to formalization in a broader sense and financial costs. Figure 8 portrays the obstacles to registering a business divided into ten categories. A couple of important conclusions can be drawn from the figure. Rows A to C suggest that getting information related to registering, the knowledge and time needed to pursue registration, are generally not or are a small obstacle for unregistered MPBAs. These findings were confirmed by the interviewed registered MPBAs. Although getting information about registration is not difficult, getting information about compliance with regulatory obligations once the company is registered is perceived as a moderate difficulty. This perception probably differs depending on entrepreneur's knowledge and literacy. Outsourcing an accounting service company to perform these activities proved as a positive practice in addressing this issue. Fees (row F) already constitute an obstacle, although the responses are rather scattered. However, taxes, contributions, parafiscal charges and the cost of accounting (rows H to I) represent quite a significant financial burden to informal entrepreneurs.

Similarly, the requirement to deal with government institutions and inspections (rows E and G) is considered as a slightly smaller difficulty, while attitudes towards bribery are ambivalent (row D). However, 98 percent of respondents have never been in a situation in which they had to pay any informal payment in order to remain unregistered.

Figure 8: Obstacles to registering a business



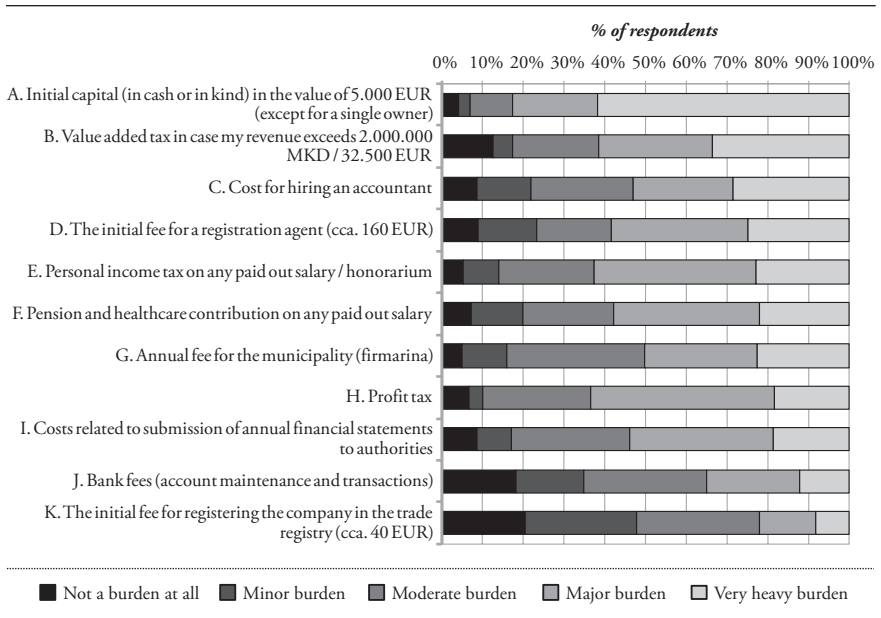
Source: Authors' calculations based on SUME.

Indeed, 43 percent of responses identified taxes and contributions to be paid on personal and company income as the key obstacle to formalization. 32.5 percent ranked para-fiscal charges as the second most important obstacle to formalization, while for 22.5 percent of respondents the expensiveness of going formal ranked as the third reason.

A more thorough examination of the costs for registering and running of a formal business (Figure 9) reveals noticeable patterns. The initial capital in the amount of 5.000 EUR is the key burden to register (row A), despite the fact that the cost of registering as a single owner is actually zero and may be a matter of the lack of information available to respondents. Fiscal and parafiscal charges (rows B and E to H), as well the cost of hiring an accountant (row C), are predominantly a major obstacle. According to the perceptions of the registered businesses, the obstacle of parafiscal charges is mainly perceived as large, due to their linearity. Namely, the key parafiscal charges, “firmarina” and communal fees (in the sectors for which they are relevant) are to be paid by all companies regardless of their size, earnings potential and maturity. Although in general the amount of these charges is not large, the relative burden for start-up and low-income companies is perceived as substantial. Pension and healthcare contributions are considered as more significant and a higher burden than the parafiscal charges in the first year of registration. In general, Figure 9 validates the early evidence from Figure 8 that costs to run a business – particularly taxes, social contributions and parafiscal duties – are considered a major financial burden for MPBAs.

The initial fee to register a company in the Central Registry is generally considered bearable (row K), but as the cost of using a registration agent quadruples (row D), it already becomes more difficult to bear. Findings from the interviews reveal that for those who operate in businesses with low profit margins and with hurdles in the access to capital (particularly relevant for female entrepreneurs and those without family support), these costs are a weighty burden. Grants for establishing a company (self-employment grants through the active labor market measures) were mentioned as positive practices that stimulate formalization and ease this burden.

Figure 9: Costs of running a formal business



Source: Authors' calculations based on SUME.

4.3 Benefits of Formality

Figure 10 presents the perceived benefits from formalization of unregistered MPBAs. Access to financing (rows A to B) is not a large motive for formalization, while the government support in times of crises (a part of which was channeled through the Development Bank) is more encouraging although answers in row F show that this is not a major motive. According to the interviews with registered companies, access to financing for newly established companies is limited and it could be a moderate motivation. One of the entrepreneurs emphasized: “At the beginning, we were not eligible for obtaining financing from anywhere. The bank required creditworthiness, but we did not have it. Nor could we satisfy the eligibility criteria from the Development Bank. The second year is easier, but in the first year nobody gives you money.” However, she then added that more

money had actually been needed in the second year, when the business started growing. This problem is even greater for companies in rural areas where banks hardly accept mortgages.

Market factors may be more motivating since access to new markets (row G), to more reliable sellers of inputs (row I), and to more serious customers (row J) was assessed as a major motive although the answers remain distributed along the motivation scale. This finding was confirmed by the registered companies. They indicated access to more serious customers, building a brand, access to different benefits (trainings, grants, subsidies), eligibility to apply to government tenders and achieving the economy of scale as key motives for formalization.

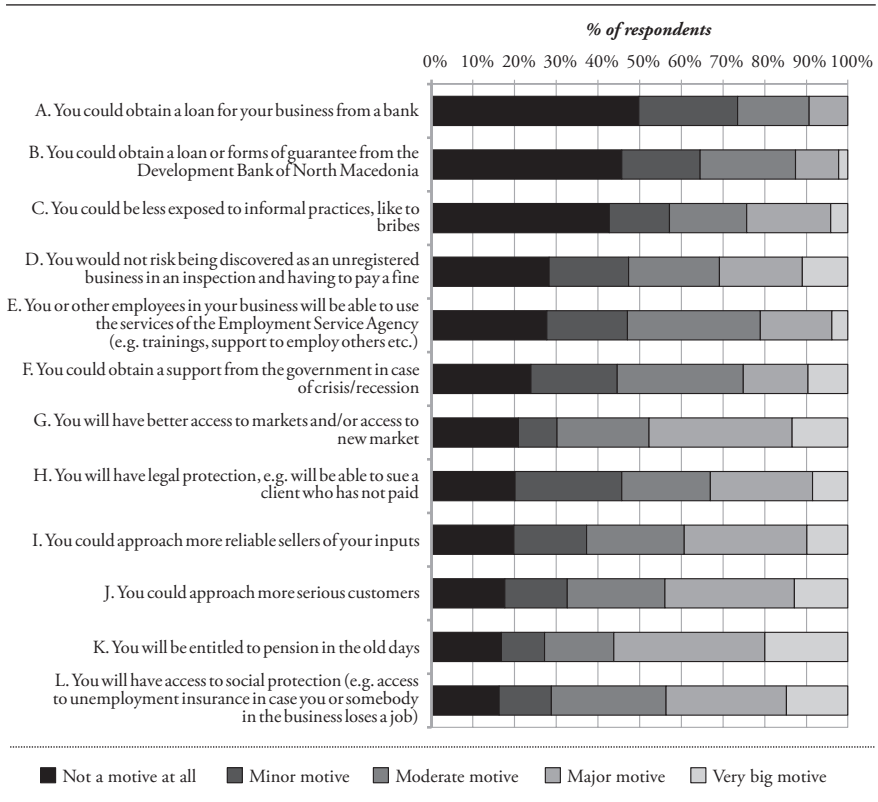
"You can act as a serious subject. In the calls for training, for grants, for every opportunity, the criterion is to be a registered legal entity. To build a brand."

"You will reach more credible customers. When you are an individual, everyone asks 'who are they'? And, as a company, it is immediately different. Customers see you differently. You immediately have access to more serious customers, bigger customers, companies".

The possibility to be insured through a social welfare scheme and an old-age pension scheme (rows K to L) provides a fairly strong motivation for formalization, which confirms the earlier finding that a large share of unregistered MPBAs have actual or fictive registered employment with another firm just to realize the right to social welfare. On the other hand, the access to a range of active labor market programs of the Employment Service Agency (ESA; row E) was assessed as not motivating. As opposed to the findings of the survey, the interviewed owners of registered companies emphasized that the ESA measures for establishing a company and subsidized employment/salaries in the first year were an immense opportunity and motivation for registration. Actually, some of them registered their company with the help of these measures. Thus, for a part of unregistered MPBAs, the problem may be just the lack of available information about what is being offered through ESA as active labor market measures.

The motivation derived from being legally protected when registered (row H) varies and is spread throughout the motivation scale. Being protected from informal practices if registered (row C) is not a motivational factor for formalization, which either suggests that bribery is not an important issue or that it is equally important for both running an informal and a formal business.

Figure 10: Benefits from running a formal business

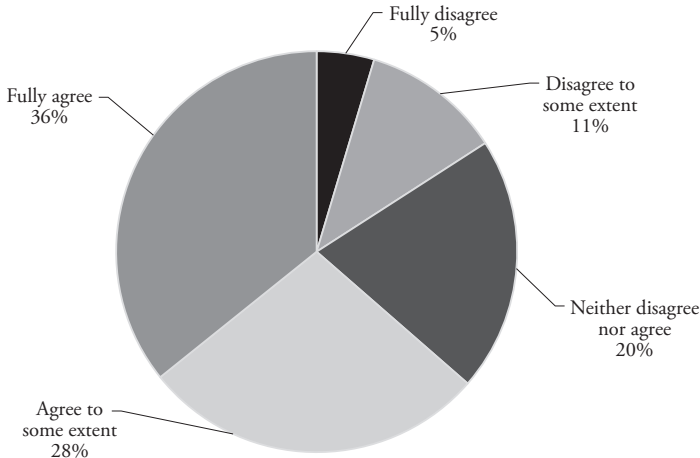


Source: Authors' calculations based on SUME.

Figure 11 presents the perception of the net cost, i.e., the extent to which costs of formalization outweigh benefits from formalization. The majority of unregistered MPBAs still believes that costs outweigh benefits, i.e., do not recognize benefits

from formalization to be large enough. 36 percent fully agreed with the negative net benefit, while 28 percent agreed to some extent.

Figure 11: *Considering all costs and benefits from registering a business, costs outweigh benefits*



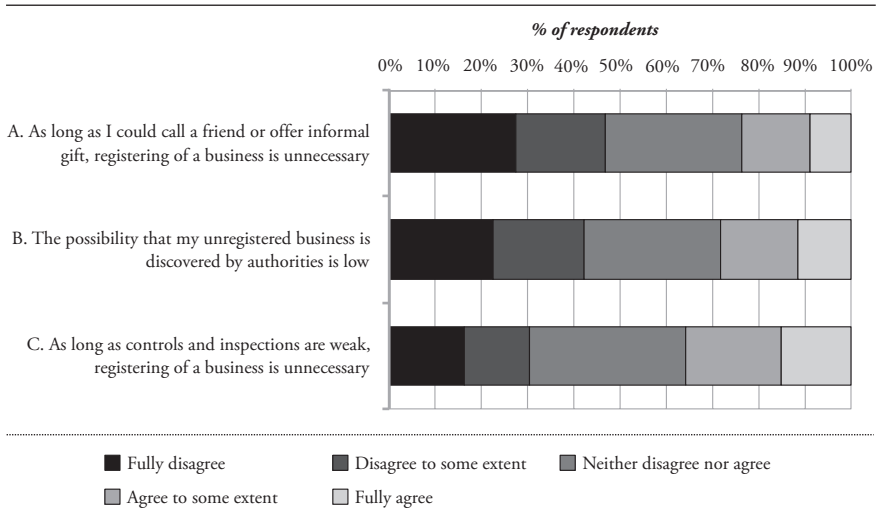
Source: Authors' calculations based on SUME.

4.4 Costs of Staying Informal

Finally, we shed some light on the perception of the probability of being discovered by authorities and an aspect of the tax morale as factors that may help staying informal (Figure 12). Respondents generally disagreed with the statement that registering a business was unnecessary as long as they could call a friend or offer an informal gift to stay informal (row A), which suggests that working to eliminate such practices – e.g., through an awareness-raising campaign – may produce only limited results. The probability of being discovered (row B) is generally not considered low. Registered companies confirmed that their fear of inspections was lower after having registered. “The greatest benefit is personal peace. Anyone who has a dilemma whether to remain unregistered to save on taxes and contributions or to register and pay all costs: do register! By being registered, we are sure that we follow the law while the business opportunities are increasing.” Respondents were

on average neutral about the question whether or not it was necessary to register when controls and inspections were weak (row C). Yet, there is still minor leaning of the answers towards agreement, suggesting that controls and inspections may still work to make staying informal expensive.

Figure 12: Costs of staying informal



Source: Authors' calculations based on SUME.

5 Factor Analysis

Groups of factors were analyzed separately so far, but their relative significance could only be understood if they are considered together. We would like to reduce the large number of variables from SUME into fewer factors through extracting maximum common variance from all variables and putting them into a common result. Thus, we conducted a factor analysis.

The Kaiser-Meyer-Olkin (KMO) test and the Bartlett's test of sphericity are initially important to determine if data are suited to be grouped into several underlying factors; in particular, the KMO test indicates if data are factorable.

A KMO value of 0.791 was calculated, which is above the threshold of 0.5, suggesting that we could proceed with factor analysis in this case. Similarly, the Bartlett's test rejects the null hypothesis that variables are not correlated, providing grounds for conducting factor analysis.

As is usual in the literature, we considered only the factors that have estimated eigenvalue higher than 1 and retained only factor loadings with absolute value exceeding 0.35. Based on this, we obtained the following output. Table 1 presents the identified factors (24, equal to the number of used variables); only the first four factors have an eigenvalue greater than 1, so we continued with these factors. In addition, they explain 89 percent of the variance in our data, supporting the notion that four concepts (factors) are sufficient to explain the phenomenon of unregistered MPBAs in North Macedonia.

Table 2 presents factor loadings on various variables that we used throughout the analysis. The first factor has major importance and explains 37.4 percent of the total variance. This factor entirely relates to benefits from formalization. Despite the fact that respondents explained that costs exceeded benefits, a major loading of this factor suggests that looking at benefits may actually be more important than prioritizing costs. However, the second factor, which explains 27.1 percent of the total variance, is a clear identification of costs (despite some loadings on the effort needed to deal with institutions and inspections). Thus, while of lower importance than benefits, costs of formalization still explain a significant share of the informal status of MPBAs. Consequently, it is necessary to observe benefits and costs together, i.e., working on only one of the two is unlikely to produce formalization gains.

Table 1: Identification of factors

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	5.42185	1.48807	0.3741	0.3741
Factor 2	3.93378	1.64911	0.2714	0.6455
Factor 3	2.28467	1.00218	0.1576	0.8031
Factor 4	1.28249	0.42321	0.0885	0.8916
Factor 5	0.85927	0.13384	0.0593	0.9508
Factor 6	0.72543	0.31655	0.05	1.0009
Factor 7	0.40888	0.14214	0.0282	1.0291
Factor 8	0.26674	0.03807	0.0184	1.0475
Factor 9	0.22867	0.04857	0.0158	1.0633
Factor 10	0.1801	0.03003	0.0124	1.0757
Factor 11	0.15007	0.06634	0.0104	1.0861
Factor 12	0.08373	0.02881	0.0058	1.0918
Factor 13	0.05492	0.0729	0.0038	1.0956
Factor 14	-0.01798	0.01676	-0.0012	1.0944
Factor 15	-0.03474	0.02419	-0.0024	1.092
Factor 16	-0.05893	0.03589	-0.0041	1.0879
Factor 17	-0.09482	0.00703	-0.0065	1.0814
Factor 18	-0.10185	0.00599	-0.007	1.0744
Factor 19	-0.10784	0.01875	-0.0074	1.0669
Factor 20	-0.12659	0.03063	-0.0087	1.0582
Factor 21	-0.15722	0.03509	-0.0108	1.0473
Factor 22	-0.19232	0.04405	-0.0133	1.0341
Factor 23	-0.23637	0.02097	-0.0163	1.0178
Factor 24	-0.25734	.	-0.0178	1

Source: Authors' calculations.

The third factor is clearly identifying the issues relevant for registration, primarily non-financial ones, which explains 15.5 percent of the total variance. The weight of this factor is quite low, as expected, yet the efforts to reduce such an administrative burden may not be in vain, but only subordinated to policy effort to increase benefits and reduce costs of formalization. The last factor weighs 8.8 percent and captures the cost of staying informal, confirming the general conclusion from Section 4.4 that such cost is perceived fairly unimportant for making the decision to formalize, i.e., that even if the probability of being discovered increased, this may not lead to a significant share of unregistered MPBAs becoming formal.

Table 2: Factor loadings

Variable	Variable	Factor 1	Factor 2	Factor 3	Factor 4
Administrative burden	Getting information			0.8458	
	Knowledge to prepare documentation			0.8988	
	Time for registration			0.8163	
	Dealing with government institutions		0.7826		
	Dealing with inspections		0.4582		0.3513
Costs of formalization	Fees for registration		0.6143	0.3962	
	Taxes		0.8259		
	Parafiscal charges		0.8626		
	Accounting services		0.8795		
Benefits from formalization	Getting a loan from the bank				
	Getting a loan from DBNM	0.5524			
	Government support in crises	0.6893			
	More serious customers	0.801			
	More reliable sellers of inputs	0.6954			
	Pension in the old age	0.7753			
	Access to social welfare	0.7864			
	ESA services	0.6906			
	Access to new markets	0.7617			
	Legal protection	0.6106			
Less exposed to informal practices	0.3695				
Costs of staying informal	Bribes to be paid				0.5825
	Weak controls and inspections				0.3508
	Call a friend or bribe				0.4579
	Possibility of being discovered				0.4138

6 Conclusions and Recommendations

Most common forms of unregistered MPBAs include: street sellers, individual farmers, handicraftsmen, providers of personal beauty services, painters, plasterers, bakers, lessons instructors, motor vehicle mechanics and housekeepers and cleaners. They are very small, judged by their income which usually does not exceed 250.000 MKD annually or by the fact that they usually perform their business activity alone (one worker), while when the activity is performed with co-workers, their number does not exceed four. The unregistered business is mainly performed in the household of the customer or in the household of the

owner, thus the clients are mainly households and individuals and rarely firms. Strikingly, 58.3 percent of unregistered MPBAs have another source of income, which is largely from standard employment, either real or fictive, to be able to receive social security.

Costs of becoming a registered firm have been identified as an important impediment to doing so, particularly the taxes, social security contributions, parafiscal charges and the cost of accounting. To a limited extent, the time and fees to deal with the administration work discourage unregistered MPBAs from registering, while access to information and exposure to bribery have been found to not play a role.

On the benefits side, access to bigger customers, to more reliable sellers of inputs and to new markets have been identified as large benefits from formalization. The second motivation is the access to social protection and pension in the old age. On the other hand, access to financing, to services from ESA and reducing the exposure to bribery have not been considered so important, but this may be due to the fact that unregistered MPBAs have not experienced these benefits.

Costs of staying informal have limited power in motivating registration. Only strengthening controls and inspections may, to some extent, work to increase the cost of staying informal, while actions to increase tax morale or reduce informal practices can do this to a lesser extent.

There are four common themes underlying informality of MPBAs (in order of significance) according to the factor analysis: benefits from formalization, costs of registering and running a business, administrative burden to register a firm, and the cost of being discovered and penalized. However, of the four factors, the first two have significant loadings to justify a policy intervention as powerful in producing formalization gains. While the net benefit of formalization has been assessed as negative, a government intervention needs to first focus on elevating benefits and then on reducing costs of formalization of MPBAs.

The findings provide grounds for offering policy recommendations. Before authorities opt for cutting/changing the costs of formalization, it is essential that they offer a range of services that may increase the (perception of) benefits for unregistered MPBAs. These benefits may include, but not be limited to: favorable loans with a grant component, specifically devised for unregistered MPBAs that intend to register; workshops/trainings for managing and attracting a large number of customers, for securing new markets, and for approaching more reliable suppliers of inputs, organized by state institutions or through a private provider; information sessions for MPBAs to have updated information on all available subsidies, grants and loans; workshops on financial literacy.

As far as costs of formalization are concerned, the government may consider further simplification of the tax system for MPBAs through establishing a 'monotax' system that will compress all possible tax, parafiscal and social security contributions in one single lump sum or percentage of earned income until the business develops up to a certain level. Still, as more than a half of those interviewed have had a second income in the formal economy (with related benefits), they might not be too inclined to become fully formal in their own cost-benefit analysis. Therefore, it is important to work on the benefits for the end-users of MPBAs' services by enabling them to deduct some of the expenses incurred from their own income tax when presenting an invoice for a purchase of a service from the provider who is a subject of the 'monotax' system.

Finally, to secure a layer of sustainability of such formalization efforts, it is key to run an information and awareness-raising campaign that will secure that MPBAs do not change back to informality as they grow or as they approach the threshold above which they will be treated as any other firm. Ultimately, it is essential to enforce applicable rules through effective and restraining sanctions.

This analysis has its own limitations. Being the first of its kind, the analysis relies on a sample of 151 MPBAs, which may be criticized for its size. While this may be valid, one should bear in mind that by being informal MPBAs are hard to

reach even by data collection agencies. Still, future research may opt for enlarging the sample. The ideal case would be that firm-related surveys in the State Statistics Office are amended to capture informality, as was done in this research. This will address the second shortcoming of our approach: it will provide an indication of the size of the problem (the share of MPBAs in the number of all firms by the number of employees, turnover etc., or in total informal or formal GDP), which was not our objective, but is equally important. Finally, a larger survey will enable a more granular approach, i.e., observing patterns by various characteristics of MPBAs, like gender, education, age, region, and, most importantly, type of business, because the latter may offer different policy recommendations for different types of micro-businesses.

Literature

Ardizzi, G., Petraglia, C., Piacenza, M., & Turati, G. (2014). Measuring the underground economy with the currency demand approach: A reinterpretation of the methodology, with an application to Italy. *Review of Income and Wealth*, 60(4), 747–772. doi: <https://doi.org/10.1111/roiw.12019>

Auriol, E., & Warlters, M. (2005). Taxation base in developing countries. *Journal of Public Economics*, 89(4), 625–646. doi: <https://doi.org/10.1016/j.jpubeco.2004.04.008>

Benhassine, N., McKenzie, D., Pouliquen, V., & Santini, M. (2018). Does inducing informal firms to formalize make sense? Experimental evidence from Benin. *Journal of Public Economics*, 157, 1–14. doi: <https://doi.org/10.1016/j.jpubeco.2017.11.004>

Bruhn, M., & McKenzie, D. (2014). Entry regulation and the formalization of microenterprises in developing countries. *The World Bank Research Observer*, 29(2), 186–201. Retrieved from: <https://openknowledge.worldbank.org/bitstream/handle/10986/15866/WPS6507.pdf?sequence=1&isAllowed=y>

Campos, F., Goldstein, M., & McKenzie, D. J. (2018). How should the government bring small firms into the formal system? Experimental evidence from Malawi. *World Bank Policy Research Working Paper No. 8601*.

Catão, L., Pages, C., & Rosales, M. R. (2009). Financial dependence, formal credit, and informal jobs: New evidence from Brazilian household data. *Inter-American Development Bank Working Paper Series No. IDB-WP-118*.

Dabla-Norris, E., Gradstein, M., & Inchauste, G. (2008). What causes firms to hide output? The determinants of informality. *Journal of Development Economics*, 85(1), 1–27. doi: <https://doi.org/10.1016/j.jdeveco.2006.05.007>

de Andrade, G. H., Bruhn, M., & McKenzie, D. (2016). A helping hand or the long arm of the law? Experimental evidence on what governments can do to formalize firms. *The World Bank Economic Review*, 30(1), 24–54. doi: <https://doi.org/10.1093/wber/lhu008>

De Giorgi, G., & Rahman, A. (2013). SME's registration: Evidence from an RCT in Bangladesh. *Economics Letters*, 120(3), 573–578. doi: <https://doi.org/10.1016/j.econlet.2013.06.026>

de Mel, S., McKenzie, D., & Woodruff, C. (2013). The demand for, and consequences of, formalization among informal firms in Sri Lanka. *American Economic Journal: Applied Economics*, 5(2), 122–150. doi: <https://doi.org/10.1257/app.5.2.122>

De Paula, Á., & Scheinkman, J. A. (2011). The informal sector: An equilibrium model and some empirical evidence from Brazil. *Review of Income and Wealth*, 57(s1), S8–S26. doi: <https://doi.org/10.1111/j.1475-4991.2011.00450.x>

De Soto, H. (1989). *The other path: The invisible revolution in the Third World*. New York: Harper and Row.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). The regulation of entry. *The Quarterly Journal of Economics*, 117(1), 1–37. doi: <https://doi.org/10.1162/003355302753399436>

Elgin, C., & Oztunali, O. (2012). Shadow economies around the world: Model based estimates. Bogazici University, Department of Economics. *Working Paper No. 2012/05*.

Elgin, C., Kose, M. A., Ohnsorge, F., & Yu, S. (2021). Understanding informality. *Centre for Applied Macroeconomic Analysis Working Paper 76/2021*.

Finance Think (2022). How large is our gray economy? How do key economic policies affect it? *Policy Brief 58*.

Fortin, B., Marceau, N., & Savard, L. (1997). Taxation, wage controls and the informal sector. *Journal of Public Economics*, 66(2), 293–312. doi: [https://doi.org/10.1016/S0047-2727\(97\)00013-3](https://doi.org/10.1016/S0047-2727(97)00013-3)

Friedman, E., Johnson, S., Kaufmann, D., & Zoido-Lobaton, P. (2000). Dodging the grabbing hand: The determinants of unofficial activity in 69 countries. *Journal of Public Economics*, 76(3), 459–493. doi: [https://doi.org/10.1016/S0047-2727\(99\)00093-6](https://doi.org/10.1016/S0047-2727(99)00093-6)

Garvanlieva Andonova, V., Andonov, V., & Nikolov, M. (2012). *Shadow economy of Macedonia*. Center for Economic Analyses. Retrieved from: https://www.cea.org.mk/documents/studii/CEA%20SHADOW%20ECONOMY%20IN%20MACEDONIA%20FINAL_4.pdf

Johnson, S., Kaufmann, D., & Zoido-Lobaton, P. (1998). Regulatory discretion and the unofficial economy. *The American Economic Review*, 88(2), 387–392. Retrieved from: <https://www.jstor.org/stable/116953>

Kelmanson, B., Kirabaeva, K., Medina, L., & Mircheva, B. (2019). Explaining the shadow economy in Europe: Size, causes and policy options. *International Monetary Fund Working Paper No. 2019/278*.

La Porta, R., & Shleifer, A. (2014). Informality and development. *Journal of Economic Perspectives*, 28(3), 109–126. doi: <https://doi.org/10.1257/jep.28.3.109>

Littlewood, D., Rogers, P., & Williams, C. (2020). Experiences, causes and measures to tackle institutional incongruence and informal economic activity in South-East Europe. *Current Sociology*, 68(7), 950–971. doi: <https://doi.org/10.1177/0011392118788911>

Loayza, N. V. (1996). The economics of the informal sector: A simple model and some empirical evidence from Latin America. *Carnegie-Rochester Conference Series on Public Policy*, 45, 129–162.

Lopez-Martin, B. (2019). Informal sector misallocation. *Macroeconomic Dynamics*, 23(8), 3065–3098. doi: <https://doi.org/10.1017/S1365100517001055>

Meghir, C., Narita, R., & Robin, J.-M. (2015). Wages and informality in developing countries. *American Economic Review*, 105(4), 1509–1546. doi: <https://doi.org/10.1257/aer.20121110>

Ordóñez, J. C. (2014). Tax collection, the informal sector, and productivity. *Review of Economic Dynamics*, 17(2), 262–286. doi: <https://doi.org/10.1016/j.red.2013.07.004>

Piza, C. (2018). Out of the shadows? Revisiting the impact of the Brazilian SIMPLER program on firms' formalization rates. *Journal of Development Economics*, 134, 125–132. doi: <https://doi.org/10.1016/j.jdeveco.2018.05.002>

Quintin, E. (2008). Contract enforcement and the size of the informal economy. *Economic Theory*, 37(3), 395–416. doi: <https://doi.org/10.1007/s00199-007-0295-7>

Rocha, R., Ulyssea, G., & Rachter, L. (2018). Do lower taxes reduce informality? Evidence from Brazil. *Journal of Development Economics*, 134, 28–49. doi: <https://doi.org/10.1016/j.jdeveco.2018.04.003>

Schneider, F., & Enste, D. H. (2000). Shadow economies: Size, causes, and consequences. *Journal of Economic Literature*, 38(1), 77–114. doi: <https://doi.org/10.1257/jel.38.1.77>

Schneider, F., Buehn, A., & Montenegro, C. E. (2010). New estimates for the shadow economies all over the world. *International Economic Journal*, 24(4), 443–461. doi: <https://doi.org/10.1080/10168737.2010.525974>

Straub, S. (2005). Informal sector: The credit market channel. *Journal of Development Economics*, 78(2), 299–321. doi: <https://doi.org/10.1016/j.jdeveco.2004.09.005>

Trenovski, B., Mijovic-Spasova, T., Mijovic-Hristovska, B., Tashevska, B., & Kozeski, K. (2021). Analysis of the COVID-19 impact on informal and part-time workers. *Analytica Policy Studies* 2021/2.

Ulysea, G. (2010). Regulation of entry, labor market institutions and the informal sector. *Journal of Development Economics*, 91(1), 87–99. doi: <https://doi.org/10.1016/j.jdeveco.2009.07.001>

Ulysea, G. (2018). Firms, informality, and development: Theory and evidence from Brazil. *American Economic Review*, 108(8), 2015–2047. doi: <https://doi.org/10.1257/aer.20141745>

Ulysea, G. (2020). Informality: Causes and consequences for development. *Annual Review of Economics*, 12(1), 525–546. doi: <https://doi.org/10.1146/annurev-economics-082119-121914>

Williams, C., & Bezeredi, S. (2018). Explaining informal entrepreneurship in South-East Europe: A tax morale approach. *Eastern Journal of European Studies*, 9(2), 47–68. Retrieved from: https://www.researchgate.net/publication/330224828_Explaining_informal_entrepreneurship_in_South-East_Europe_A_tax_morale_approach