

Illegitimate Economic Practices in Croatia

Findings from a representative survey of 2,000 citizens

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Executive Summary

This report presents the findings of a survey on illegitimate economic practices in Croatia conducted between August and October 2015. This representative survey of 2,000 citizens focused on the experiences of Croatians with undeclared work, envelope wages and the practice of 'pulling strings', as well as on their opinion about these types of dishonest behaviour.

According to the respondents, violating practices are strongly ingrained in Croatian society. For instance, almost six out of ten respondents were certain that at least one in five citizens regularly violates tax and labour laws. The most important reasons are believed to be the lack of formal employment opportunities and insufficient income from regular employment

When it comes to the use of personal connections in order to circumvent rules and procedures, 86.4% of Croatians perceive this particular type of misbehaviour as important or very important for achieving certain goals in Croatia. Moreover, one in nine citizens has a positive attitude towards this illegitimate practice, while a further three in ten are neutral in their attitude towards such practices. It is thus unsurprising that there is a high prevalence of these illicit activities.

The survey reveals that 16% of Croatians acquire goods from the undeclared economy, 20% pay for undeclared services, 9.2% of employees are employed without a work contract, 6.6% of registered dependent employees earn more than is stated in their contract, 30.8% of Croatians rely on illegitimate help/favours from people, and that 20.2% of the population provides such help/favours. However, these should all be

treated as lower-bound estimates, given that surveys tend to under-report participation when sensitive issues are being investigated.

Analysing involvement in undeclared work, nevertheless, the findings reveal that tax morale and personal views on the extent to which others participate are key determinants. The lower one's tax morale, the higher the propensity to participate in the undeclared economy (and this applies to both the demand and supply sides). Likewise, the higher is the perceived number engaged in such activity, the stronger is one's personal inclination towards such behaviour.

Undeclared work is found to be particularly prevalent in agriculture and the construction industry. More than one third of the informal buyers had purchased agricultural products (milk, meat, crops, fruits, etc.) without a receipt over the 12 months prior to the survey, while three out of ten admitted to having hired an undeclared individual for home repair and maintenance tasks. On the supply-side, 21.4% of those reporting participation in undeclared work had provided home repair and renovation services, while 8.5% were selling agricultural products.

Social ties play an essential role in unregistered economic transactions in Croatia. Every second undeclared transaction in Croatia is with a close social relation. Primarily, these are friends, colleagues and acquaintances, rather than relatives and neighbours. Presumably, these two latter groups are seldom compensated for their contribution, i.e. their involvement can be characterised as unpaid assistance. This finding that undeclared work is often conducted for close social relations is also reflected in the fact that one in three undeclared workers described their actions as being motivated by a desire to help people rather than for economic gain. Indeed,

one third of the providers of informal goods and services asserted that this is a normal way of operating.

The undeclared economy in Croatia thus seems to be a parallel universe to the declared economy, offering a similar range of goods and services but for a lower price than the formal market, with this being identified as the most important motivation by purchasers of undeclared goods and services. This was also confirmed on the supply side; 32.1% of undeclared workers admitted that mutual financial benefit of both parties was a key reason to conceal the transaction from the authorities. In addition, every fourth individual was engaged in unregistered activities simply due to the lack of formal employment, which therefore indicates that undeclared work indeed has an important role in making ends meet for many individuals in Croatia. This in large part explains why unemployed and self-employed individuals are more likely to work undeclared in Croatia than other occupational groups.

Agriculture and construction are also top of the list of sectors with regard to the prevalence of envelope wages in Croatia, with 28.3% and 16.1% respectively of the formal workforce in these two sectors receiving more than they report to the authorities. As in the case of completely undeclared work, tax morale and the perceived commonality of undeclared work (i.e., the lack of vertical and horizontal trust) are key determinants of envelope wage practices in Croatia.

Under-declaration of wages in Croatia is most commonly instigated by the employer in seven out of ten illegitimate unwritten agreements identified. Indeed, this type of noncompliance seems to primarily serve as an efficient tax and social contribution

evasion strategy for employers. In general, under-reporting of wages was found to be most common among new entrants to the labour market.

Analysing pulling strings to get things done, the survey reveals that Croatians most often circumvent procedures related to medical services, with 17% of participants admitting to having relied on personal connections in order to skip a queue for a hospital, to get a better medical examination or to shorten the waiting time for surgery at least once in the last 12 months. Croatians also heavily rely on pulling strings searching for a job, as well as when seeking services at a better quality or better price.

Almost 60% of participants requested friends to pull strings for them, while 30% used relatives. This explains why pulling strings in Croatia is rarely a monetary transaction, given that in most cases either only verbal gratitude was expressed to the provider of the favour/help, or the favour was returned later. In general, younger people are far more likely to provide or use such favours than older generations, while there is no significant difference between genders in this respect.

Analysing how illegitimate practices can be tackled, Croatians do not believe that increased penalties for violators would be an effective approach, and the same applies to awareness raising campaigns alone. Instead, the prevalent opinion is that undeclared work in Croatia cannot be reduced without improving the psychological contract between the authorities and citizens (i.e., vertical trust), and this should be done first and foremost by changing formal institutions. Citizens widely believe that there is a need for a change in the way in which enforcement agencies treats citizens. This primarily refers to more collaboration and less coercion on the part of the

inspectors, as well as the provision of equal treatment across all groups of citizens. Finally, citizens believe that ensuring a sense of fair treatment in public and government institutions would reduce the use of personal connections.

1 Introduction

There has been a growing interest in comprehending the causes and nature of the economic activities by companies and individuals that remain 'hidden' from the authorities (Sauka et al., 2016; Williams, 2016a,b, 2017; Williams and Schneider, 2016). This issue has particularly come to the fore after the onset of the economic downturn in 2009, which caused substantial drops of public budget revenues (Andrews, Caldera Sánchez, & Johansson, 2011; CSD, 2011; Dekker, Oranje, Renooy, Rosing, & Williams, 2010; Eurofound, 2013; Williams, 2014a,b,c; Williams and Schneider, 2016). Large fiscal deficits have forced governments around Europe to start actively seeking for efficient policy measures that would discourage economic subjects from various forms of tax evasion (Dekker et al., 2010; Eurofound, 2013; Williams & Nadin, 2012b; Williams, Windebank, Baric, & Nadin, 2013). To enhance collaboration of the member states in this respect, the European Commission established the European Platform Tackling Undeclared Work in May 2016 (European Commission, 2016). Additionally, the Commission has been actively supporting a range of research projects studying the roots of this phenomenon in Europe.

This report presents the most important findings from one such program which is focused on three South-East European economies facing a high social embeddedness of noncompliant behaviour. The IAPP project titled 'GREY - Out of the shadows: developing capacities and capabilities for tackling undeclared work in Bulgaria, Croatia and FYR Macedonia' aims at providing well-founded recommendations to policy-makers in these three countries so as to more efficiently combat illegitimate economic practices (European Commission, 2013).

Apart from substantial structural problems, which are primarily reflected through inefficient state apparatus, weak rule of law and prevalent corruption in the public sector, the roots of tax evasion in these three countries can also be found in pervasive unemployment (Bejaković, 2012; CSD, 2011; Dzhekova & Williams, 2014; Eurostat, 2016b; Transparency International, 2015; Williams, Franic, & Dzhekova, 2014; World Bank, 2015). According to estimates by Schneider (2016), illegitimate economic activities in Croatia and Bulgaria account for 27.1% and 30.2% of the GDP respectively, which places them at the top with regard to the prevalence of this phenomenon in the EU. The disobedience with tax and labour regulation is even more prevalent in FYR Macedonia, given that one third of the official GDP remains hidden from the authorities in this EU-candidate country (Schneider, Buehn, & Montenegro, 2010).

To get rigorous evidence on the mechanisms underlying hidden economic activities in the given countries, two separate questionnaire surveys were conducted in each country¹. The first surveyed individuals and their activities, while the second explored unregistered economic practices by companies. This report provides an insight into individual-level aspects of the phenomenon in Croatia by reporting the first survey, which was based on a representative survey of 2,000 households conducted between August and October 2015². The main aim of this particular survey, whose detailed description is given later in this chapter, was to determine which demographic and

¹ Yet, the endeavours to understand the causes and nature of 'hidden activities' were not limited solely to these six surveys. For information on other activities within the GREY project see <http://www.grey-project.group.shef.ac.uk/>.

² This is just one of several different reports prepared in this respect. Other reports can be found at: <http://www.grey-project.group.shef.ac.uk/>.

socio-economic groups in Croatia are more likely to carry out illegitimate economic activities, as well to understand their rationales for doing so. In addition, the idea was to evaluate the attitudes of citizens towards various types of noncompliant behaviour and their reasoning as policy-takers regarding the most effective strategies to reduce disobedience with labour and tax legislation.

It is, however, important to state that our inquiry into hidden economic practices was limited solely to the two groups of activities widely recognised as having detrimental influence on economic and social climate in the country. The first group of activities, which is commonly known under the name 'undeclared work', connotes "any paid activities that are lawful as regards their nature but not declared to the public authorities, taking into account differences in the regulatory system of Member States" (European Commission, 1998, p. 4). Undeclared work thus embraces all paid activities that deliberately remain concealed so as to evade taxes and/or social security contributions or simply to circumvent labour legislation, but are completely legitimate in all other respects. This implies that criminal activities (such as human trafficking, drug smuggling and prostitution) are not included, and the same applies to unpaid activities (self-provisioning, volunteering, unpaid community work, etc.).

Besides undeclared work, the survey also studied another type of dishonest behaviour, which can be defined as "the use of personal networks for obtaining goods and services in short supply, or for circumventing formal procedures" (Ledeneva, 2013, p. 273). This particular phenomenon is known under various names in the literature: in post-soviet countries it is denoted as 'blat', while in the Arab world it is called 'wasta' (Eng. Going in between) (Onoshchenko & Williams, 2013).

In China, meanwhile, it is referred to as 'guanxi' (Eng. Connections), while in Brazil this practice is termed 'jeitinho' (Eng. Little way out)³. Leaving aside minor differences between these terms, throughout this report we will denote this phenomenon as 'pulling strings', which is the most common name for this practice in the English-spoken world. In the context of the report, 'pulling strings' denotes the practice of relying on personal connections (i.e. help from relatives, friends, colleagues or acquaintances) to obtain goods and services outside formal means of conduct in different spheres of life, regardless of the reward/compensation that accompanies the arrangement. Thus, we do not distinguish between paid favours and those that do not entail monetary transaction, given that the primary emphasis is on understanding motivations of people to engage in this practice, not on the exact nature of the agreement between the stakeholders involved.

In the rest of this chapter, therefore, we first give a short overview of the economic situation in Croatia, the newest EU member state which is the focus of this report. This chapter concludes with a brief description of the representative survey of 2,000 Croatian citizens, whose results are then presented in Chapters 2-7. To evaluate illegitimate economic practices in Croatia, we commence with an elaboration on taxpayers' perceptions in this respect, primarily regarding the prevalence of undeclared work, the role of pulling strings in everyday life, the effectiveness of repressive endeavours by the authorities and tolerance towards various types of misbehaviour. Chapter 3 provides an overview of the demand side of undeclared work in Croatia, while discussion about envelope wage practices in this South-East European country is given in Chapter 4. The insight into undeclared work is

³ For more detailed discussion on this matter see Onoshchenko and Williams (2013).

completed in Chapter 5, which reports the most important findings on the supply side of this phenomenon. Chapter 6 then elaborates on the causes and nature of pulling strings practices, both from the demand and supply side. The report ends with the overview of taxpayers' opinions regarding the most effective policy strategies to combat noncompliant behaviour in Croatia.

1.1 Croatia – slow transition encumbered by numerous structural problems

At the moment of its accession to the EU in July 2013, Croatia was nowhere near the average of the remaining 27 member states in terms of its economic development (Eurostat, 2017a). With GDP per capita amounting to € 10,200 at the time, this newest member state joined Romania and Bulgaria at the bottom of the list in this respect (Eurostat, 2017a). Not much has changed since then, as Croatia was among the last of the European economies to overcome the economic crisis (Eurostat, 2017b). This youngest member state also occupies some of the lowest positions in the EU in many other vital fields, such as its employment rate, government effectiveness, judiciary independence, public sector corruption and trust in public institutions (European Commission, 2007; Eurostat, 2016a; Transparency International, 2017; World Bank, 2015).

The essential roots of the current state of affairs in this South-East European country can be traced back to the chaotic initial phase of the transition (Bejaković, 2009; Franic & Williams, 2014). Namely, the collapse of the socialist regime in Croatia entailed not only the need for transformation to the capitalist market, but also the battle for independence. In such circumstances, the primary interest of political elites and the wider public during the first half of the 1990s was on the ongoing war, which resulted

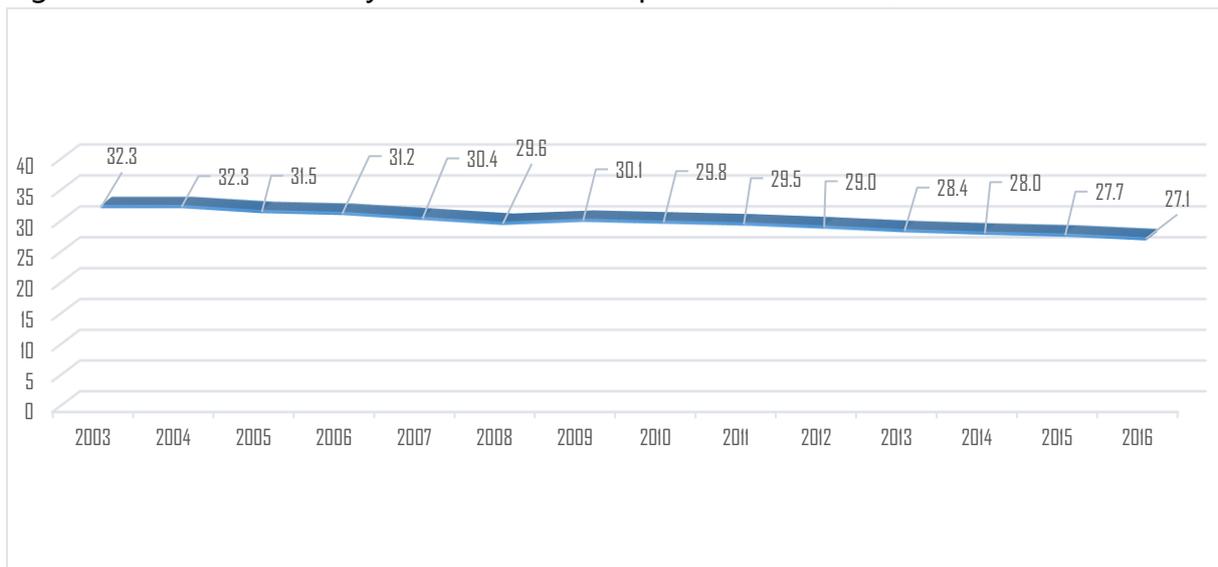
in many illegitimate activities related to the privatisation of public companies staying under the radar (Franičević, 1997). This initial period of transformation in Croatia, which is often denoted as 'wild capitalism', was a fertile ground for various interest groups to acquire substantial assets in the privatisation process under non-transparent transactions, as well as for the development of many dishonest economic and social practices (Čučković, 2002; Šundalić, 1999).

Corruption was certainly one of the most prevalent such practices, given that it had become a standard 'modus operandi' in Croatia by the end of the millennium (Šundalić, 1999). Accompanied with growing reliance on personal connections to solve everyday issues with the public administration, this state of affairs entailed a substantial decline of trust in the state institutions. This eventually weakened the psychological contract between the state and citizens, thus increasing occurrences of tax evasion out of defiance (Bejaković, 2009; Franic & Williams, 2014; Williams & Franic, 2015).

Moreover, the 1990s were characterised by a considerable reduction of employment, which brought many people to the edge of poverty, thus forcing them to find alternative income earning strategies (Crnković-Pozaić, 2002; Karajić, 2002). In such a situation, many used undeclared work as the only way to make ends meet. However, this initial phase of transformation passed without any significant effort of the government to tackle the phenomenon. One possible explanation for this lack of the response is that the authorities might actually have been tacitly approving of undeclared work during that period since it represented an important cushion for the economic problems that the country faced at the time.

Yet, the start of the new millennium brought a renaissance of the Croatian economy, which further postponed development of a strategic approach towards the eradication of this practice. This issue also fell out of the interest in the academic community, which invested praiseworthy efforts to comprehend the roots of this multifaceted phenomenon during the late 1990s (see Ott, 2002). This lack of interest enabled illegitimate economic practices to gradually become a standard way of operating in this South-East European country during the mid-2000s, as according to Schneider (2016) the official estimates of GDP during the pre-crisis period were underestimated by almost one third of its value due to hidden activities (see Figure 1).

Figure 1 Shadow economy in Croatia for the period 2003-2016, % of the official GDP



Note: Shadow economy in this context assumes all “legal business activities that are performed outside the reach of government authorities” (Schneider, 2013, p. 3), thus matching the scope of activities analysed in this report

Source: Schneider (2016)

It was not until the onset of the economic downturn that the issue of the undeclared economy in Croatia received attention in public and political circles. Since then, a lot has been done to reduce the occurrence of noncompliant behaviour in this South-

East European country (see Franic & Williams, 2014; Williams & Franic, 2015, 2016a; Williams et al., 2013). The breaking moment in this respect was the accession to the EU, which actually represented the start of systematic approach towards solving this problem. For instance, Croatia was included in the last wave of the Special Eurobarometer Survey on undeclared work conducted in 2013, which was the first comprehensive insight into the issue in this country (European Commission, 2014).

The results of this particular survey revealed that 7% of the Croatian citizens were working on an undeclared basis in 2013, while 17% were purchasing goods and services off-the-books (European Commission, 2014). These shares were much higher than in most other member states, which explains the high interest of the European Commission in combating undeclared work in Croatia.

Indeed, the Commission has invested substantial efforts in this respect, not only by enabling Croatian authorities to exchange experience with other member states⁴, but also by providing a significant fund for researchers and policy-makers to explore the complex mechanisms behind the phenomenon. As already mentioned, this report is an outcome of one such research project, which seeks to fill the substantial gaps in knowledge about the causes and nature of the hidden economic activities in Croatia. The recommendations given within the GREY project are heavily based on a representative survey of 2,000 individuals and a survey of 521 companies. This report

⁴ Besides participation in servicing the European Platform Tackling Undeclared Work, the policy experts in Croatia are also involved in the twinning project 'Strengthening Policy and Capacities to Reduce Undeclared Work'. The main aim of the project, which is jointly conducted by the Ministry of Labour and Pension System of Croatia, Ministry of Labour, Social Affairs and Family of the Slovak Republic, Federal Ministry of Finance of the German Republic and Regional Development Agency of the Slovak Republic, is to develop an efficient strategy to tackle undeclared work in Croatia (<http://www.mrms.hr/svecano-predstavlanje-twinning-projekta-jacanje-politike-i-kapaciteta-za-suzbijanje-neprijavljenoga-rada/>)

summarises the most important findings from the first of the two. Before moving to the results, we shall give a description of the questionnaire and the sampling strategy applied.

1.2 Representative survey of 2,000 individuals in Croatia – a brief description

The household survey comprised a total of 56 questions divided into seven thematic areas. In this section we only provide a broad overview of the matters discussed with the surveyed individuals, while the exact wording of questions will be given through the report along with the summary of the results.

Given the sensitivity of the issue scrutinised, the idea was to start with some general questions in order to alleviate potential discomfort of the respondents. The introductory part of the questionnaire was thus dedicated to socio-economic characteristics of the surveyed individuals, such as their marital status, size of the household and occupational status.

The survey then shifted to the issue of undeclared work, but the initial phase was focused only on attitudes and opinions of the participants in this respect. For instance, the participants were asked to estimate the share of the population working on an undeclared basis and to give their view on the most important rationales for such behaviour, as well as to enumerate the economic sectors in which they believe this type of noncompliance occurs most often. What is more, the respondents were also asked to evaluate the risk of being detected by the authorities when carrying out undeclared work and to express their attitude towards different types of noncompliant behaviour.

The insight into the exact experience of the survey respondents with undeclared economic activities commenced in the third part of the survey, and this was done by first focusing on their involvement from the demand side. Individuals who admitted buying undeclared goods and services were then asked some supplementary questions in order to comprehend their motivations for doing so, as well as to find out who was the supplier, how much money they spent, etc.

This was followed by an insight into the issue of under-declared employment in Croatia, which was discussed only with the individuals in waged employment. As before, the participants who admitted receiving one part of their wage in cash were asked several additional questions so as to get a deeper insight into the nature of this phenomenon.

Involvement of the survey participants in the supply of undeclared goods and services was evaluated in the fifth section of the survey. To enable triangulation of the findings, questions asked in this part of the survey to a great extent reflected those asked when scrutinising the demand side. Thus, those who identified themselves as undeclared workers were also asked about the reasons for doing so, as well as who was the buyer, how much money they earned this way, etc. This section concluded with an insight into the most effective policy responses to tackle undeclared work in Croatia from the standpoints of the survey participants as policy-takers.

The focus then moved to the practice of pulling strings in various social and business spheres. The strategy applied in this part of the survey was quite similar to those in previous parts, as respondents who admitted involvement in this particular misbehaviour were then asked several supplementary questions so as to grasp the

most important aspects of the practice. Explicitly, the participants were asked about their rationales for doing so, as well as who were their accomplices and what compensation accompanied the transaction. Akin to the case of undeclared work, both the demand and supply side of the pulling string practices in Croatia were evaluated.

The interviews finished with a range of questions on the somewhat sensitive demographic and socio-economic characteristics of the surveyed individuals, but which are important for understanding taxpayers' behaviour. Namely, this final section of the survey was concerned with the exact age of the participants, their income from formal work, income from undeclared work, self-assessed financial situation and a few other important issues (as discussed below).

The fieldwork, which was conducted between August and October 2015, encompassed 2,000 individuals. A two-way stratified random sampling procedure was applied to find respondents, with the stratification based on regions and settlement size. Regional classification was grounded on six traditional regions in Croatia (North Croatia; Slavonia; Zagreb and surroundings; Lika and Banovina; Istria, Primorje and Gorski Kotar; and Dalmatia), while categories of settlement sizes were defined as: (1) less than 2,000 inhabitants; (2) 2,000 – 10,000 inhabitants; (3) 10,001 – 100,000 inhabitants; and (4) more than 100,000 inhabitants. This resulted in 22 strata, given that two regions did not have a settlement with population above 100,000.

In the first step, a group of settlements was selected within each stratum, whereas the probability assigned to each settlement was proportional to its relative size (measured by population). In total, 110 settlements were chosen. In the second step, a starting point in each settlement was selected randomly, while subsequent addresses

were identified using 'random walk' procedure (explicitly, every 6th household going right was chosen). The third step assumed selection of one respondent within each household, and this was done using the 'closest birthday' procedure among household members aged 15 years or more.

To adjust the chosen sample with the real situation inside the population, each respondent was later assigned their sampling weight whose calculation was based on gender, age, education level, region and settlement size. It is important to stress that all results presented in the following chapters were obtained using sampling weights. In line with this, one must be aware that the numbers given in the rest of this report do not actually represent the 'percentage of survey respondents' , but rather the 'projected percentage of population' . Still, both these phrases will be used interchangeably here as in most analyses discussed through the report there are only negligible difference between the two scenarios (i.e. with and without weights applied).

2 Illegitimate economic practices from the perspective of Croatian citizens

To fully grasp the complex nature of illicit economic practices, it is first essential to understand the wider social context in which such behaviour occurs. For that reason, we start by examining the attitudes and perceptions of Croatian citizens with regard to hidden practices. This, as will become apparent, relates to one of the most important motivations to disobey legislation in Croatia, as well as to the social and economic groups commonly engaged in such activities. Both these issues will be discussed in the first section of this chapter.

The second section dissects attitudes of Croatians regarding the efficiency of the enforcement apparatus in this South-East European country. This is followed by an insight into the level of tolerance towards various violating behaviours in section 2.3. The last part of the chapter analyses the views of Croatians on the pervasiveness of personal connections in the country and the importance of this strategy for overcoming everyday social and business difficulties.

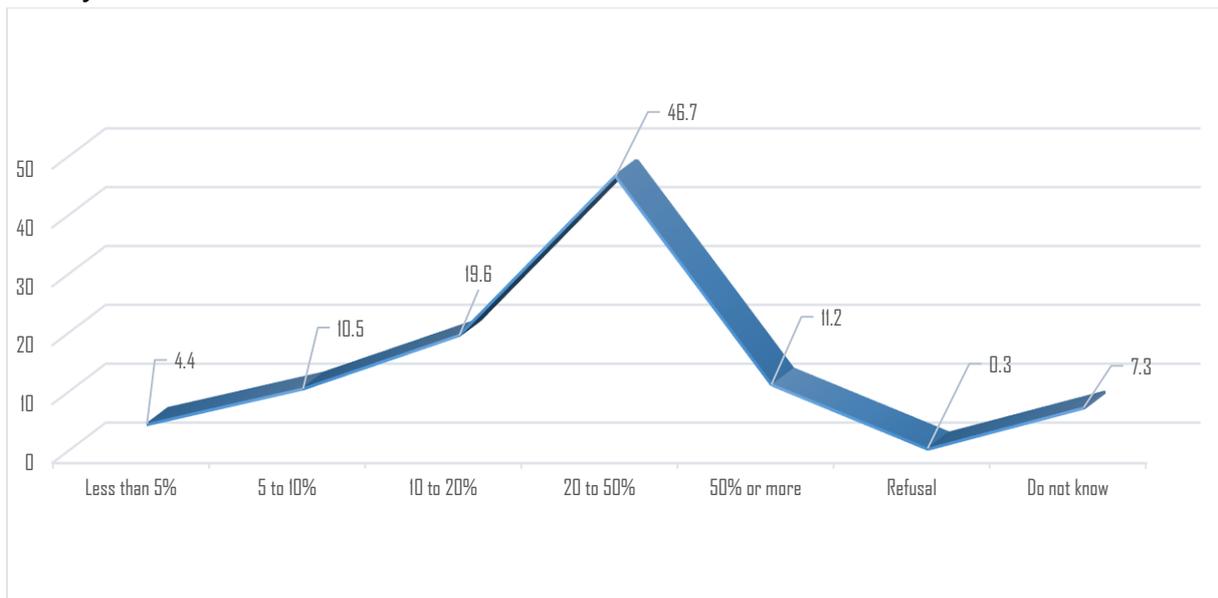
2.1 Views of Croatians on the nature and causes of undeclared work in the country

As described, every interview started with general questions on socio-economic characteristics of the respondent (marital status, size of the household, employment status, etc.). Once the focus shifted to unregistered economic practices, each respondent was first explained what is meant by the term 'undeclared work'. The interview then continued by asking some general attitudinal questions on the matter, with the first of them being structured as follows:

What would you estimate as the share of population in Croatia which works without declaring their income or part of their income to the tax or social security institutions?

According to the results on this particular question, summarised in Figure 2, undeclared work is perceived as a highly common occurrence in Croatia. Almost one half of citizens think that between 20% and 50% of the active population is engaged in some activities that are legal per se, but remain concealed from the authorities. Every tenth individual went even further by stating that the majority of population do not report all their activities to the authorities. In addition, one in five citizens expressed confidence that this share ranges between 10% and 20%, thus also describing this practice as being fairly prevalent in society.

Figure 2 Estimated share of citizens working on an undeclared basis in Croatia, % of surveyed individuals



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

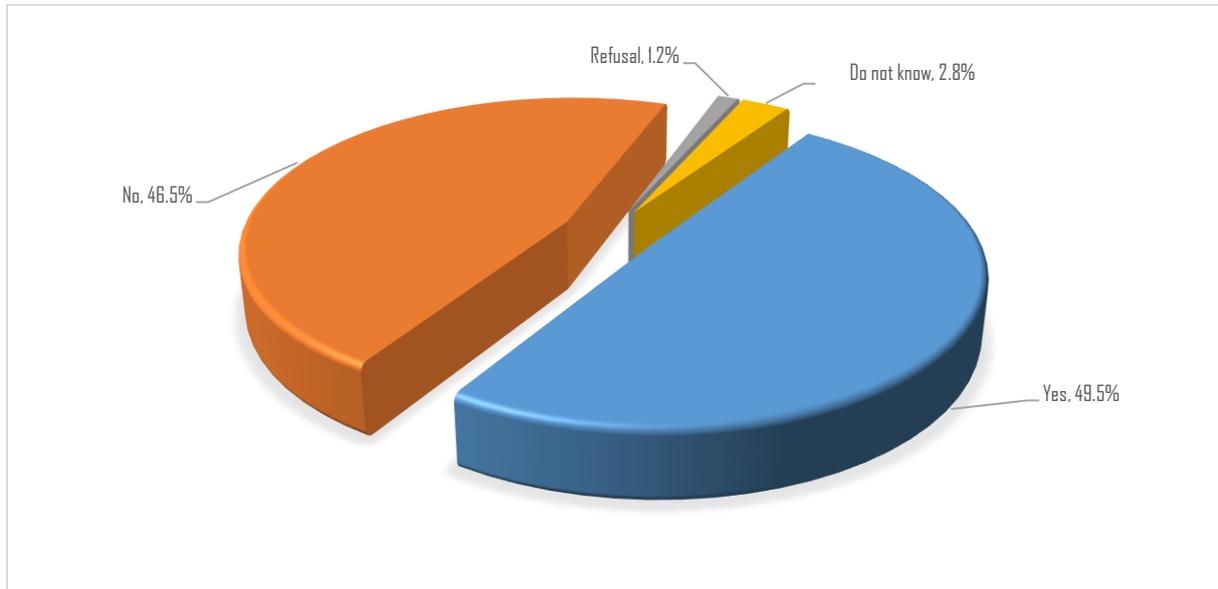
On the other hand, only 4.4% of the survey participants perceived this phenomenon as not being particularly significant problem in Croatia, as according to their belief less than 5% of population engages in tax evasion practices. Finally, a further 10.5% were certain that undeclared practices are moderately prevalent, thus estimating that only 5-10% of population disobeys labour and tax legislation.

The presented findings therefore suggest that undeclared work is mostly perceived as a highly widespread phenomenon in Croatian society, denoting a lack of horizontal trust in Croatia. This notion can be further exemplified by the results of the second question on this matter, which was asked:

Do you personally know any people who work without declaring their income or part of their income to the tax or social security institutions?

The results show that that every second Croatian citizen knows at least one person working on an undeclared basis (see Figure 3). One can therefore see that many Croatians are familiar with this practice, at least indirectly from the experience of their friends, relatives, colleagues or acquaintances. Yet, 46.5% of the participants answered negatively to this question, while 4% either refused to answer or did not know the exact answer.

Figure 3 Share of Croatians knowing somebody who works on an undeclared basis, % of surveyed individuals



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Whether these perceptions of citizens regarding participation really match the situation in practice will be evaluated in the subsequent chapters. Before that, however, it is important to scrutinise what Croatians think about other important aspects of illegitimate practices. We start with their views on the occupational structure of undeclared workers, which were provided by the following question:

Which TWO of the following groups are in your opinion most likely to carry out undeclared work in Croatia?

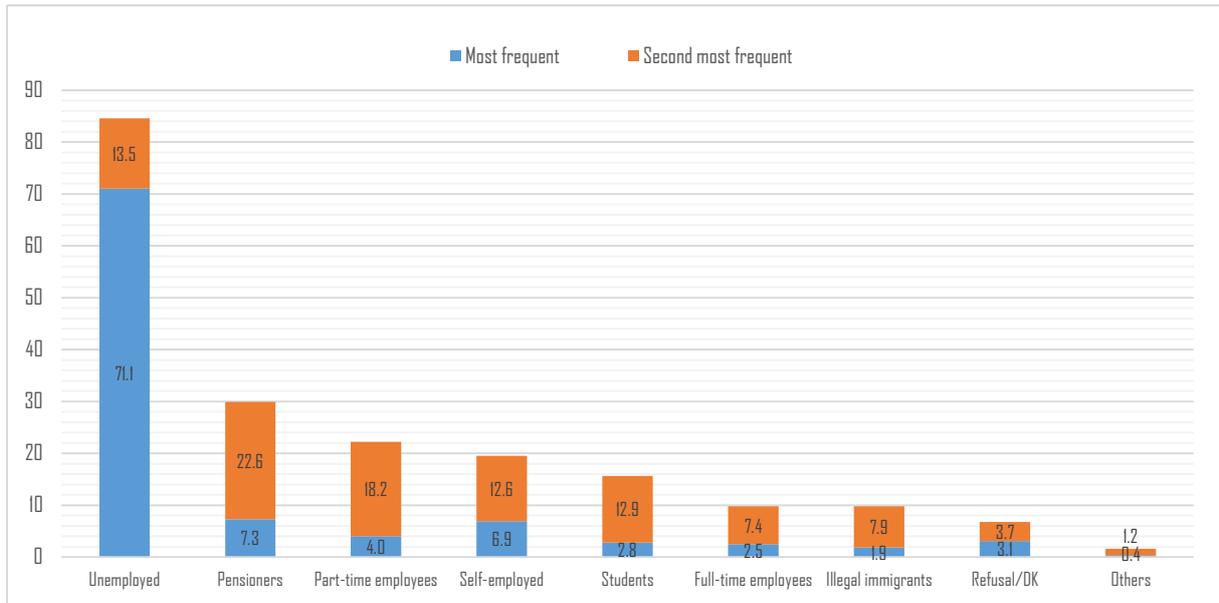
Every respondent was asked to choose two groups from the following list of occupations: unemployed; self-employed; pensioners; full-time employees; part-time employees; students; and illegal immigrants. Yet, the possible answers were not limited

to the given list of economic statuses, as participants were free to identify some other groups of individuals in this respect.

In the opinion of Croatian citizens, undeclared economic activities are by far most common among people who are officially unemployed (see Figure 4). To be more exact, 71.1% of the participants were certain that registered unemployed individuals are most likely to carry out undeclared work in Croatia, while 13.5% identified them as the second most frequent group to conduct undeclared work. This gives a total of 84.6% of the survey respondents viewing unemployment as one of the key factors behind undeclared practices in Croatia.

Turning to other employment statuses, the results summarised in Figure 4 reveal that retired individuals are also widely recognised as a group of citizens highly prone to undeclared work. Approximately 30% of Croatians believe that this particular group of individuals is most likely to work on an undeclared basis compared with other employment statuses.

Figure 4 Most frequent occupational groups inside the undeclared realm in the view of Croatian citizens, % of surveyed individuals



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Part-time employees are also considered to be an important cohort of the undeclared workforce. In total, 22.2% of the survey participants argued that part-time employees are among the two most frequent employment status groups to conduct undeclared work. They are followed by self-employed individuals, which are identified as one of the two most frequent occupational groups inside the undeclared realm by every fifth participant. On the other hand, Croatians generally think that undeclared work is not particularly common among full-time employees and illegal immigrants, at least when compared to the other groups mentioned.

However, these are just perceptions, which do not necessarily match the situation in lived practice. The same note of caution applies to their views on the most important causes of undeclared work in Croatia, which were also scrutinised in this introductory part of the survey. This particular issue was approached in a similar manner as the previous one, with the exact question being structured as:

What are in your opinion the TWO most important reasons for engaging in undeclared work in Croatia?

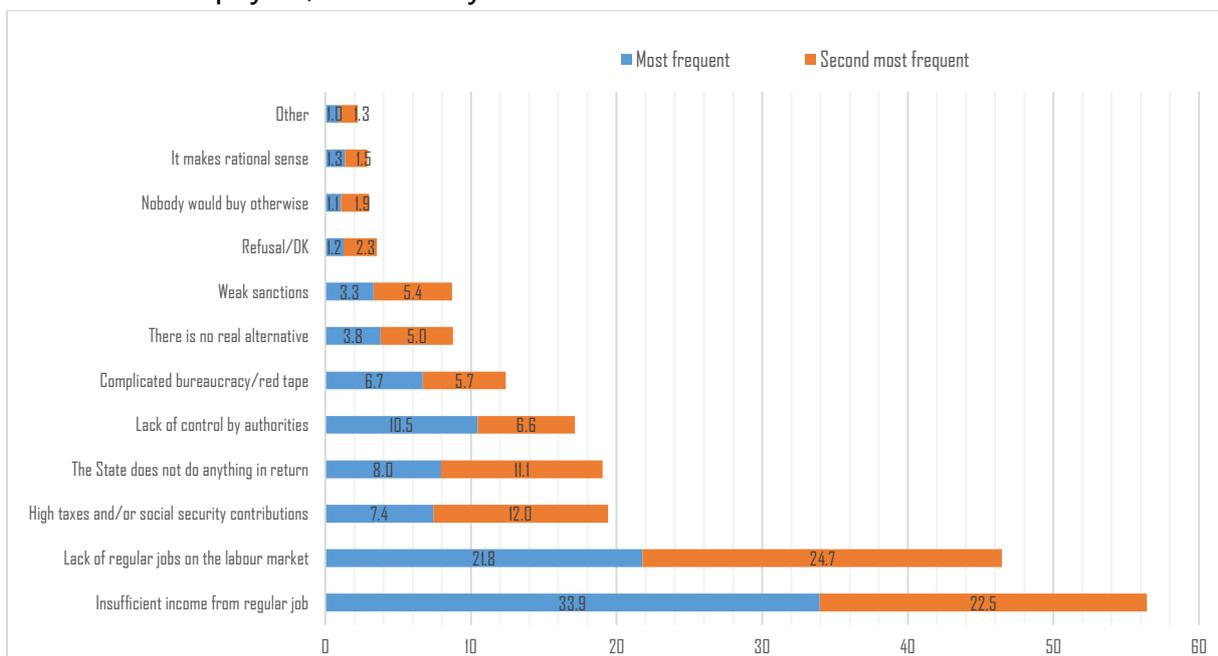
Again, a list of possible rationales was offered, although the answers were not limited solely to this list since the respondents were allowed to give their own additional reasons. As can be seen from the results, which are presented in Figure 5, there is a great level of consensus among Croatians regarding the key rationales for people participating in the undeclared realm. The participants identified insufficient income from a regular job and the lack of regular jobs as the two most frequent drivers of undeclared work in Croatia. In particular, the need to supplement low earnings from the official economy was recognised as one of the two most salient rationales by 56.4% of the respondents, while 46.5% of them argued the same for the lack of regular jobs. This outcome is not surprising having in mind the views on the most frequent employment statuses.

All other possible rationales received much lower level of recognition as potentially prominent motivations for Croatians engaging in undeclared work. For instance, a high tax burden was the third most frequently mentioned rationale, but with less than 20% of the survey participants identifying this particular issue as being among the top two problems in this respect.

However, it is important to stress here that a non-negligible part of the population sees defiance towards the state as an essential rationale for undeclared work in Croatia. As Figure 5 displays, almost every fifth citizen believes that it is not worth paying taxes

since the state does not do anything in return. Finally, a substantial proportion of respondents identified weak enforcement mechanisms as one of the most salient drivers of noncompliant behaviour; 17.1% of the participants argued that insufficient controls encourage people to engage in undeclared work, while 8.7% were certain that the pervasiveness of undeclared work in Croatia can be explained by weak sanctions.

Figure 5 Most frequent reasons to participate in undeclared work from the standpoint of Croatian taxpayers, % of surveyed individuals



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

To further evaluate this matter, the following section gives a more detailed insight into the effectiveness of the deterrence measures in Croatia. The discussion is based on the findings from two questions. The first one was related to the perceived detection risk, while the second sought to assess what sanctions Croatians expect to receive if caught when carrying out undeclared work.

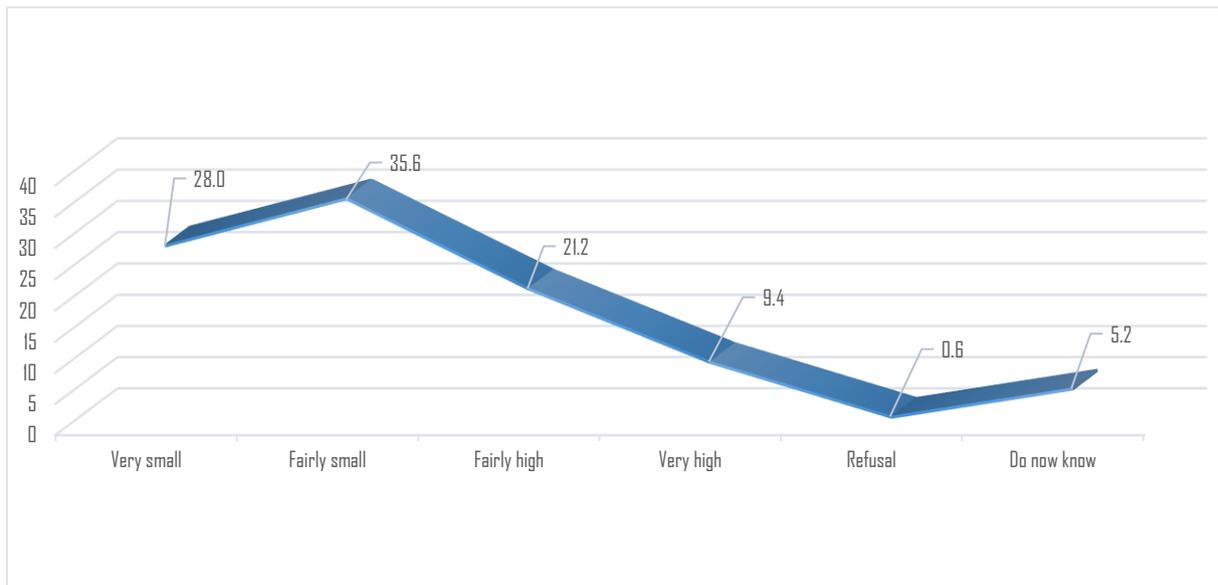
2.2 The role of deterrence

To appraise the significance that economic actors in Croatia attach to the cost side of undeclared work, every participant in the survey was asked the following question:

People who work without declaring the income risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in Croatia?

Four reference points were provided and respondents had to approximate their perception with the closest option. The offered answers were: very small; fairly small; fairly high; and very high. As Figure 6 reveals, Croatians do not see the fear of being detected by the authorities as particularly worrying. More than one third of participants were certain that the risk is fairly small, while 28% went even further stating it is very small. This suggests that there is a significant room for improvement on the part of the authorities in this respect.

Figure 6 Perceived detection risk in Croatia, % of surveyed individuals



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Indeed, the detection risk was regarded as being very high by less than 10% of participants. It should also be mentioned that a share were unable to assess the exact risk, which resulted in the answer 'do not know' being chosen in 5.2% of the cases.

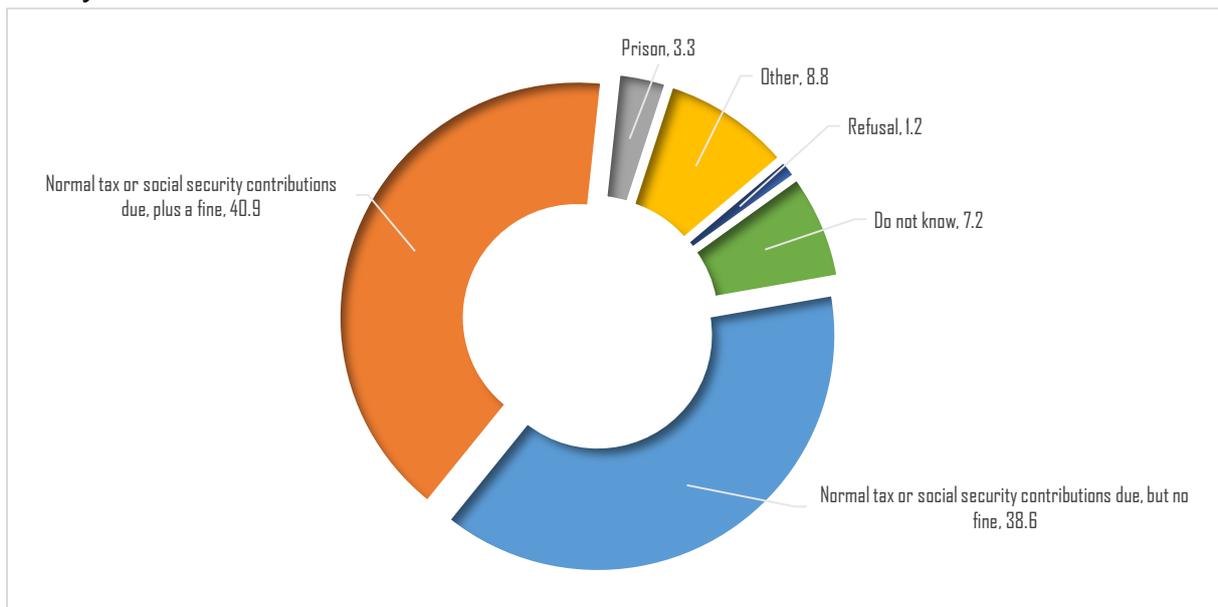
To evaluate the second aspect of the deterrence, namely their perceptions of the penalties, every participant was given a concrete scenario and asked what penalty they would expect if detected by the authorities in that case:

In your opinion, what sanction is to be expected if the authorities find out that someone has had an income from work of 250 Euros per month which was not declared to the tax or social security authorities?

Three possible sanctions representing different levels of harshness were given: normal tax or social security contributions due, but no fine; normal tax or social security

contributions due, plus a fine; and prison. Each respondent was also allowed to suggest other options.

Figure 7 Expected sanctions when detected in undeclared work in Croatia, % of surveyed individuals



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

As Figure 7 reveals, even though a substantial proportion of Croatians do not believe that any additional sanction will be imposed beyond the normal tax or social contributions due (38.6%), four out of ten believed that there would also be fine imposed as well as the taxes and social contributions due. However, only 3.3% of Croatians expect to be imprisoned if found to be engaged in such undeclared work.

As with the risk of detection, a share were not certain about the exact repercussions (7.2%), which suggesting that many Croatians are actually not familiar with the legislation in this respect. Beyond deterrence, there is also the issue of tax morale,

which is another feature playing important role in whether to engage in undeclared work.

2.3 Attitudes towards undeclared economic activities in Croatia

To understand whether citizens view undeclared work as acceptable behaviour, citizens were asked size questions about the acceptability of different types of undeclared work:

- 1) Someone receives welfare payments without entitlement⁵.
- 2) A private person is hired by a private household for work and he/she does not report the payment received in return to tax or social security institutions although it should be reported.
- 3) A firm is hired by a private household for work and it does not report the payment received in return to tax or social security institutions.
- 4) A firm is hired by another firm for work and it does not report its activity to tax or social security institutions.
- 5) A firm hires a private person and all or a part of the salary paid to him/her is not officially registered.
- 6) Someone evades taxes by not or only partially declaring income.

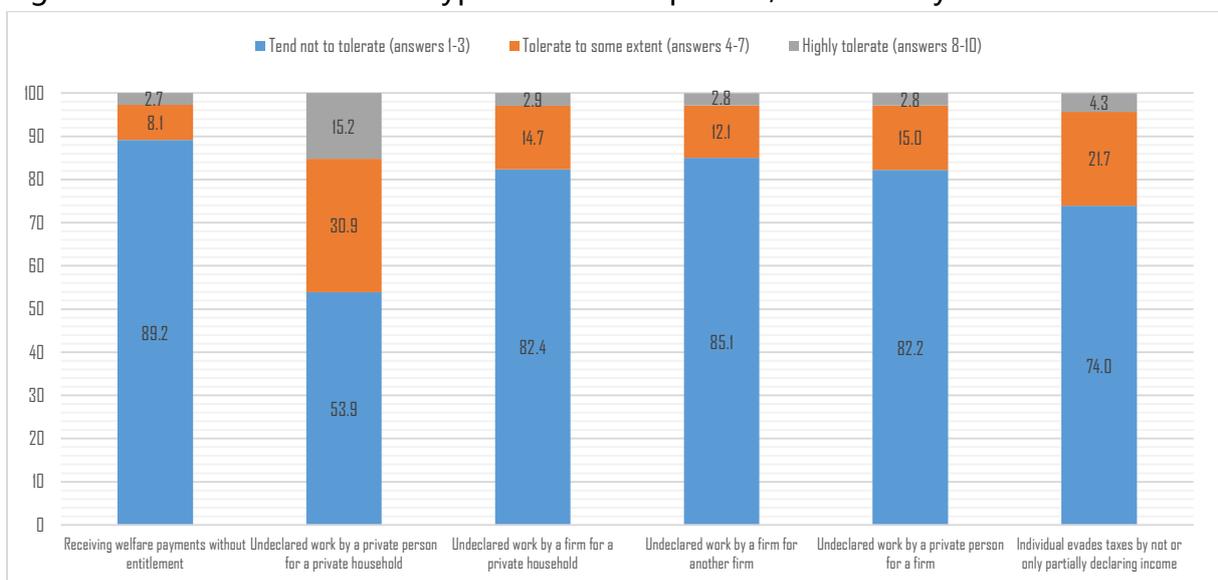
The respondents were then asked to express their level of tolerance towards each of these six situations on a 10-point Likert-type scale, where higher values indicate greater tolerance. The exact question was structured as follows:

⁵ This refers to a situation in which an individual deliberately choses to work on an undeclared basis simply to keep receiving welfare payments, as he or she would lose these benefit otherwise.

Now I would like to know how you assess various behaviours. For each of them, please tell me to what extent you find it acceptable or not. Please use the following scale: '1' means that you find it "absolutely unacceptable" and '10' means that you find it "absolutely acceptable" .

Figure 8 presents the results. The most apparent finding is that Croatian citizens tolerate undeclared work by a private person for a private household to a much greater extent than the remaining five types of noncompliance. Only every second citizen disapproves of this particular form of undeclared work, which is a substantially lower share than is the case for all other forms of undeclared work considered. At the same time, 15.2% of Croatians were highly tolerant of undeclared work conducted by a private person for a private household, which clearly confirms that this type of misbehaviour is by far the most tolerated form of undeclared work in Croatia.

Figure 8 Toleration of various types of noncompliance, % of surveyed individuals



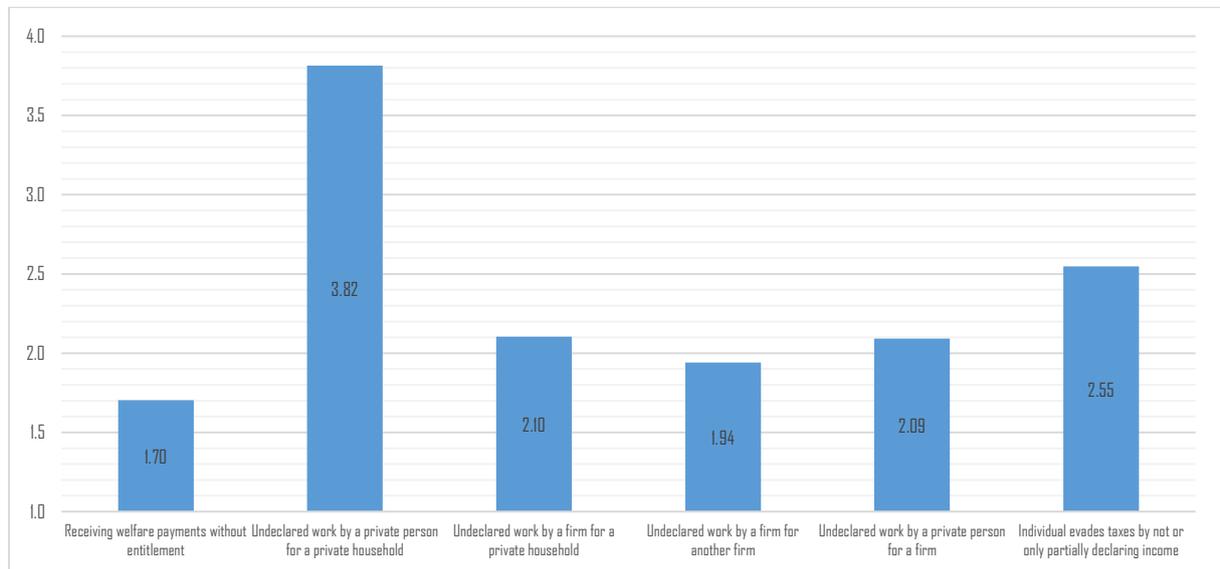
Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

A scenario in which a private person partially or completely conceals their income from the authorities appears to be moderately or highly approved by one quarter of the population, therefore placing this particular type of noncompliance in second place. Yet there is an evident difference between the two. For instance, only 4.3% of Croatians highly tolerate evasion of personal income taxes and social contributions by self-employed individuals, which is a much lower share than in the case of individuals working for a private household on an undeclared basis (15.2%).

Although one might assume based on these findings that undeclared work by private persons is more tolerated in Croatia than undeclared work by firms, this is not the case. Namely, the results summarised in Figure 8 also reveal that Croatians are least tolerant towards receiving welfare payments without entitlement. For instance, almost nine out of ten participants highly disapproved situations in which an individual chooses undeclared work simply to preserve the right to receive financial support from the public budget.

On the other hand, it seems that Croatians do not particularly differentiate between various types of tax evasion by companies. The results indicate that undeclared work by a firm for another firm is somewhat less tolerated than situations in which private persons are one party in the transaction. To verify this, Figure 9 presents the findings in a slightly different form, giving an average level of support for each of the six forms of undeclared work.

Figure 9 Toleration of various types of noncompliance: a comparison of average scores



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Indeed, this alternative view better displays the differences between the acceptability of the six types of undeclared work. Undeclared work by a private person for a private household enjoys much higher average approval than the other five forms of noncompliant behaviour. This particular type of disobedience received an average tolerance of 3.82 out of 10. It is followed by partial or complete concealment of income by private persons, with the average amounting to 2.55.

On the other hand, individuals receiving welfare benefits without entitlement received the lowest average support (1.70), while there is no substantial difference in tolerance of the three situations related to undeclared work by firms. Yet, undeclared work by firms for another firm seems slightly less supported, with an average tolerance of 1.94.

To assess the extent to which Croatians indeed differentiate between these six types of misbehaviour, Table 1 gives the matrix of bivariate correlations for each pair. This reveals that Croatians indeed apply different criteria towards receiving welfare payments without entitlement compared with the remaining five violating behaviours. The accompanying correlation coefficients range from 0.25 to 0.43 (see column 2 in Table 1), thus indicating that even though attitudes towards the dishonest claiming of social benefits are positively associated with attitudes towards other misbehaviours (i.e. those who tend to tolerate other illegitimate practices will also tend to tolerate this particular one and vice versa), these associations are quite weak.

Table 1 Attitudes towards six types of undeclared work, correlation matrix

	Receiving welfare payments without entitlement	Undeclared work by a private person for a private household	Undeclared work by a firm for a private household	Undeclared work by a firm for another firm	Undeclared work by a private person for a firm	Individual evades taxes by not or only partially declaring income
Receiving welfare payments without entitlement	1.00	0.25	0.43	0.42	0.37	0.37
Undeclared work by a private person for a private household	0.25	1.00	0.42	0.31	0.38	0.52
Undeclared work by a firm for a private household	0.43	0.42	1.00	0.77	0.66	0.55
Undeclared work by a firm for another firm	0.42	0.31	0.77	1.00	0.71	0.57
Undeclared work by a private person for a firm	0.37	0.38	0.66	0.71	1.00	0.62
Individual evades taxes by not or only partially declaring income	0.37	0.52	0.55	0.57	0.62	1.00

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

A similar conclusion can be drawn in the case of tolerance towards undeclared work by an individual for a private household. The associated correlation coefficients range from 0.25 to 0.52 (see column 3 in Table 1), which suggests that attitudes towards undeclared work by an individual for a household also seem to be quite independent from their attitudes towards the remaining five violating behaviours. On the other hand, the magnitude of correlations among the four remaining types of undeclared work indicate that Croatians presumably do not significantly distinguish between them. For instance, the bivariate correlation coefficients for these four variables range from 0.55 to 0.71, which designates quite a high level of interdependency among them.

To further assess this, Table 2 shows how each individual variable contributes to the joint measures of interdependency. The second column of the table for instance gives the correlation between a variable and the sum of the remaining five variables. The findings endorse the earlier notion that Croatians apply different criteria when assessing undeclared work by a private person for a private household compared with other types of undeclared work, and the same applies to receiving welfare payments without entitlement. This is also evident when changes in the average inter-item correlation after excluding an individual variable are scrutinised (column 3). Exclusion of the first two variables would increase the average inter-item correlation, while the opposite holds true for the remaining four variables.

Table 2 Inter-item correlations and Cronbach' s alpha

	Item-rest correlation	Average inter-item correlation when the variable is excluded	Cronbach' s alpha when variable is excluded
Receiving welfare payments without entitlement	0.45	0.55	0.86
Undeclared work by a private person for a private household	0.47	0.55	0.86
Undeclared work by a firm for a private household	0.76	0.45	0.80
Undeclared work by a firm for another firm	0.74	0.46	0.81
Undeclared work by a private person for a firm	0.73	0.46	0.81
Individual evades taxes by not or only partially declaring income	0.69	0.47	0.82
Test scale		0.49	0.85

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

The same conclusion is reached when examining the values of Cronbach' s alpha, which are given in the last column of Table 2⁶. Cronbach' s alpha accounts for 0.85 when all six variables are included (see the last row of the table). Yet, omitting the first two variables increases this value, while it drops if any of the remaining four is excluded.

To draw conclusions, the exploratory factor analysis was applied in the last step⁷. The analysis indeed confirmed that there is more than one latent construct driving attitudes of Croatian citizens towards the six types of noncompliance. As expected, answers on the last four questions were influenced by one single factor, while

⁶ Ranging between 0 and 1, this indicator measures internal consistency of variables. Higher values of Cronbach' s alpha indicate higher consistency within the sample. For detailed explanation of Cronbach' s alpha and its exact formula see Tavakol and Dennick (2011).

⁷ The goal of the exploratory factor analysis is to see whether individual' s performance on a set of observed indicators can be explained by a smaller number of latent mechanisms. Commonly known as 'factors' , these mechanisms are not directly measurable, but are instead hidden constructs with the observed variables being their manifestations in overt behaviour. For more details on the exploratory factor analysis see for instance Raykov and Marcoulides (2008).

different reasoning mechanisms lie behind attitudes towards the first two violating behaviours⁸. Yet, it should be stressed that the obtained factors were not completely independent from each other. Reflecting high interest in understanding the psycho-sociological roots of undeclared work in Croatia, the extracted values of the most dominant factor (i.e. the one shaping attitudes towards the last four types of disobedience) will be used as a tax morale index in further analyses.

After dissecting perceptions of Croatians about various types of noncompliance, we move to the issue of pulling strings. It is, however, important to say that this here reports only results on opinions of the participants in this respect, while their lived practices will be discussed in detail in Chapter 6.

2.4 Views of Croatian citizens on importance of personal connections in everyday life

To analyse to what extent citizens support the use of personal connections to get things done, as well as to get some insight into the societal dimension of this practice, the following question was posed:

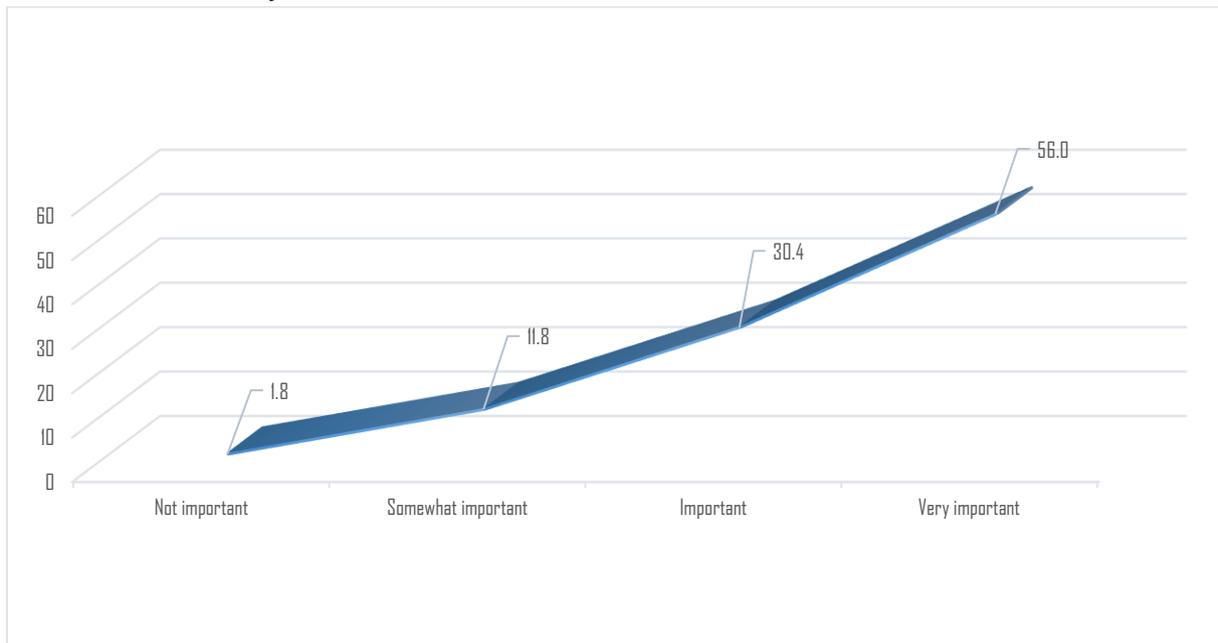
In your opinion, how important are connections to achieve certain goals in Croatia?

The respondents were asked to express their views on a four-level scale: not important; somewhat important; important; and very important. Figure 10 reveals that

⁸ The exact details of the applied procedure are beyond the scope of this report, and thus will not be discussed here. Explanations and data can be obtained by request from the authors.

86.4% of the participants perceived this practice as important or very important for achieving certain goals. In other words, most Croatians think that reliance on personal connections is necessary if one wants to sort out various problems, which indicates that this illegitimate practice is highly ingrained in Croatian society.

Figure 10 Views of Croatians on importance of connections to achieve certain goals in Croatia, % of surveyed individuals



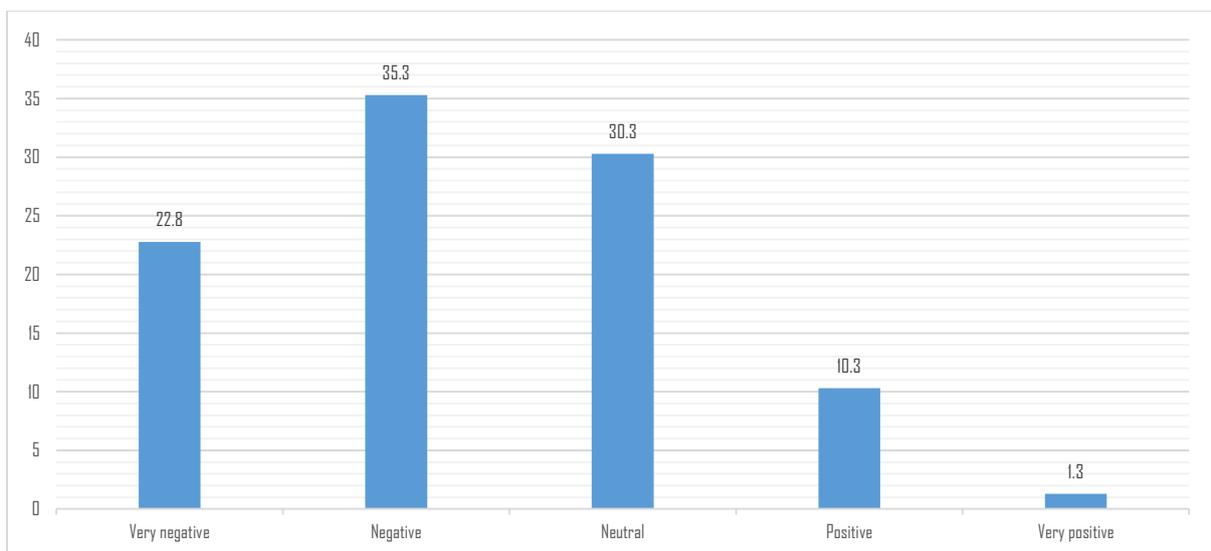
Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

On the other hand, less than 2% of the respondents were certain that everyday problems and tasks can be easily handled without assistance from friends, relatives and acquaintances. Although suggesting the pervasiveness of pulling strings to get things done, these results do not display the attitudes towards this practice. To find this out, the following question was posed:

What is your attitude towards having things done by pulling strings/using connections?

The following options were offered to choose from: very negative; negative; neutral; positive; and very positive. As Figure 11 displays only slightly above one half of population has a negative attitude towards this misbehaviour; 58% highly oppose the practice of seeking for help or favours from people within one’s social circles so as to achieve advantage in various spheres of life. On the other hand, one in ten citizens see this as a rather positive phenomenon, while a further 1.3% have a very positive opinion about using this to resolve problems and skip obstacles. Some three out of ten are neutral.

Figure 11 Attitudes towards having things done by pulling strings, % of surveyed individuals



Source: Authors’ own calculations based on the representative survey of 2,000 individuals in Croatia

Based on these results, one can see that a substantial segment of the population has more or less a predisposition to participate in this type of dishonest behaviour. To what extent pulling strings really happens in practice will be discussed latter. Before that, we will first focus on citizens' engagement in various types of undeclared work. This will be done in three steps: the discussion starts with the overview of the demand side of undeclared work, which is given in the next chapter. Chapter 4 then presents the most important findings on envelope wage practices, while the supply side of undeclared work in Croatia is evaluated in Chapter 5. After discussing these three aspects of undeclared work, we move to pulling string practices.

Perceptions of taxpayers in Croatia – key facts

- ✓ Croatsians generally think that undeclared work is a highly prevalent practice in society.
- ✓ Unemployment identified as the key factor behind undeclared activities in Croatia.
- ✓ Enforcement mechanisms widely recognised as being quite weak.
- ✓ Undeclared work by a private person for a household is by far the most tolerated way of disobedience with labour and tax legislation in Croatia.
- ✓ Citizens highly oppose receiving welfare payments without entitlement.
- ✓ Croatsians mostly believe that for achieving certain goals one must rely on personal connections.

3 An insight into the demand side of undeclared work in Croatia

Examining their personal involvement in the purchase of undeclared goods and services, the first section of this chapter provides a descriptive overview of the demographic, socio-economic and geographical characteristics of those buying undeclared goods and services. The issue is then evaluated in more depth in section 3.2 by applying logit modelling⁹. Since this particular type of statistical analysis scrutinises all available explanatory factors in parallel, it represents an essential tool in determining which individual characteristics indeed exert influence on the demand for undeclared goods and services, and which do not. The discussion is then continued in section 3.3, which summarises the most important findings on the exact goods and services bought, people who provided these goods and services, as well as on the reasons for relying on informal means of payment.

3.1 Purchasers of undeclared goods and services – a descriptive overview

The inquiry about the demand for undeclared goods and services in Croatia started with the following two questions:

⁹ Binary logit models are used to evaluate how well an individual's response to a binary outcome variable can be predicted by responses on the set of explanatory variables (Cramer, 2003; Hosmer, Lemeshow, & Sturdivant, 2013)

Q1) Have you in the last twelve months acquired any SERVICES of which you had a good reason to assume that they involved undeclared work, i.e. that the income was not completely reported to tax or social security institutions (e.g., because there was no invoice or VAT receipt or they offered you a 'price for cash')?

Q2) And have you in the last twelve months acquired any GOODS of which you had a good reason to assume that they embodied undeclared work, i.e. that the income was no completely reported to tax or social security institutions?

In total, 15.9% of the surveyed individuals admitted buying goods on an undeclared basis during the last 12 months, while 20% stated they had acquired one or more services on an undeclared basis. Table 3 reports the results. Since there are no substantial differences in demographic, socio-economic and geographic characteristics between the individuals who purchased goods on an undeclared basis and those who purchased services, findings for these two segments will be discussed together.

Starting with the role of gender, men seem to be slightly more prone to acquire goods and services undeclared than women (see Table 3). While 16.4% of men admitted purchasing goods undeclared and 21.2% services, for women this amounted to just 15.4% and 18.9% respectively.

When it comes to age, Table 3 shows that the oldest age cohort is much less prone to purchase undeclared than the rest of population. For instance, only 9.7% of people

aged 65 or more purchased undeclared goods, while this rises to 14.3% for individuals between 55 and 64 years of age. Although there is no substantial difference between the remaining groups, it is nevertheless noticeable that the youngest individuals (15-24 years of age) are somewhat less inclined to this practice than the rest of the active population. Yet, this primarily applies to the purchase of services as in the case of goods this discrepancy is much less pronounced.

Croatians living on their own seem to be much less prone to turn to the undeclared market when seeking products and services. This is exemplified not only by the fact that single and widowed individuals comprise a minor segment of all undeclared purchasers, but also considering the link between the size of the household and readiness to participate in undeclared purchases. In general, the larger the number of people in a household seems to entail a higher propensity of an individual to rely on undeclared purchases. Yet, one must be careful here as the role of marital status and size of one's household may actually be mere reflections of other drivers. For instance, since older individuals are far more likely to be widowed and to live alone, it is reasonable to assume that actually their age (or perhaps employment status) influences their propensity to participate in the undeclared market, and therefore the effects of marital status and the size of the household might be spurious. More about this issue is given later.

Table 3 Demand for undeclared goods and services in Croatia, % of surveyed individuals

		Purchase of undeclared goods				Purchase of undeclared services			
		Yes	No	Refusal	DK	Yes	No	Refusal	DK
Gender	Male	16.4	79.7	0.6	3.3	21.2	77.4	0.5	0.9
	Female	15.4	81.3	0.7	2.6	18.9	78.9	0.8	1.4
Age	15 - 24	16.0	78.8	1.1	4.1	15.4	81.0	0.8	2.8
	25 - 34	19.6	77.7	0.5	2.2	23.0	75.3	0.6	1.1
	35 - 44	19.1	77.1	1.2	2.6	24.8	73.9	0.6	0.7
	45 - 54	18.1	78.0	0.5	3.4	22.8	75.1	0.6	1.5
	55 - 64	14.3	82.2	0.5	3.0	19.5	78.6	1.1	0.8
	65+	9.7	87.4	0.3	2.6	15.0	84.3	0.3	0.4
Marital status	(Re)Married	16.3	81.2	0.4	2.1	21.4	77.2	0.3	1.1
	Cohabiting	22.6	73.6	2.8	1.0	23.2	73.8	2.4	0.6
	Single	15.6	78.9	0.5	5.0	15.6	81.9	0.5	2.0
	Divorced	18.2	75.7	0.0	6.1	23.4	73.5	1.2	1.9
	Widowed	7.2	88.4	0.9	3.5	16.0	82.4	1.3	0.3
Household size	One	11.6	83.8	0.2	4.4	15.7	82.8	0.7	0.8
	Two	15.7	81.6	0.8	1.9	19.4	78.8	1.0	0.8
	Three	18.7	77.1	0.7	3.5	23.4	74.6	0.5	1.5
	Four or more	17.1	79.6	0.7	2.6	20.9	77.0	0.3	1.8
Occupation	Dependent employee	18.0	79.1	0.5	2.4	24.1	74.3	0.5	1.1
	Self-employed	27.4	65.0	2.7	4.9	22.9	74.4	2.7	0.0
	Unemployed	18.2	78.5	0.5	2.8	19.6	78.4	0.4	1.6
	Retired	10.6	86.5	0.4	2.5	16.4	82.5	0.7	0.4
	Inactive (students, disabled, etc.)	16.4	76.6	1.6	5.4	15.1	80.9	0.7	3.3
Financial situation	Struggling	15.8	80.5	0.5	3.2	18.7	79.7	0.7	0.9
	Maintaining	14.3	82.2	0.5	3.0	18.8	80.0	0.5	0.7
	Just comfortable	19.2	77.7	0.9	2.2	24.5	72.2	0.7	2.6
	No money problems	12.3	77.6	4.2	5.9	19.0	76.8	4.2	0.0
Net income from formal work	0	16.4	80.2	0.7	2.7	16.7	80.9	0.5	1.9
	1-2,500	14.2	83.2	0.5	2.1	16.4	82.0	0.7	0.9
	2,501-5,000	16.4	79.6	0.6	3.4	21.9	76.8	0.7	0.6
	5,001-7,500	19.0	79.0	0.0	2.0	26.7	73.3	0.0	0.0
	7,501-10,000	15.6	78.0	0.0	6.4	28.4	71.6	0.0	0.0
	10,001-15,000	0.0	96.0	0.0	4.0	24.0	72.0	0.0	4.0
	More than 15,000	15.2	49.6	0.0	35.2	49.5	50.5	0.0	0.0
Estimated share of population engaged in UW	Less than 5%	8.6	89.6	0.0	1.8	9.3	90.7	0.0	0.0
	5 to 10%	12.3	83.9	1.3	2.5	14.7	83.9	0.5	0.9
	10 to 20%	11.7	85.4	0.5	2.4	14.3	84.8	0.4	0.5
	20 to 50%	18.9	77.6	0.5	3.0	23.7	74.4	0.6	1.3
	50% or more	22.9	73.5	0.4	3.2	31.6	65.0	1.3	2.1
Perceived detection risk	Very small	15.3	81.2	0.8	2.7	20.0	78.4	0.5	1.1
	Fairly small	17.6	78.5	0.4	3.5	23.0	75.3	0.2	1.5
	Fairly high	13.4	83.8	0.7	2.1	16.9	81.2	0.8	1.1
	Very high	15.6	82.5	1.5	0.4	17.5	80.1	1.9	0.5
Expected sanctions	Tax + contributions	16.1	81.8	0.4	1.7	20.5	78.9	0.3	0.3
	Tax + contributions + fine	15.6	80.2	0.5	3.7	20.3	77.7	0.6	1.4
	Prison	4.2	92.7	0.0	3.1	10.0	90.0	0.0	0.0
Tax morale	<2	12.4	84.9	0.3	2.4	17.1	81.8	0.4	0.7
	2-4	23.3	71.0	1.3	4.4	26.4	71.3	0.4	1.9
	4-6	19.7	74.4	2.5	3.4	23.4	71.3	3.3	2.0

Type of commun.	6-8	31.1	68.9	0.0	0.0	30.6	67.8	0.0	1.6
	8-10	11.3	79.3	0.0	9.4	11.3	79.3	0.0	9.4
	Rural area or village	16.7	81.1	0.7	1.5	20.3	77.8	0.8	1.1
	Small or middle sized town	18.5	78.2	1.0	2.3	23.6	74.3	0.9	1.2
	Large town	11.1	83.0	0.2	5.7	14.4	84.2	0.0	1.4
Region	Zagreb	11.5	82.6	0.6	5.3	15.3	82.6	0.4	1.7
	North Croatia	10.0	85.7	1.0	3.3	16.6	80.4	1.3	1.7
	Slavonia	18.8	79.4	0.8	1.0	20.1	79.3	0.6	0.0
	Lika and Banovina	17.2	81.2	0.0	1.6	18.9	80.0	0.0	1.1
	Istria, Primorje and Gorski Kotar	20.4	75.6	0.5	3.5	30.1	68.2	1.0	0.7
	Dalmatia	21.1	76.9	0.6	1.4	23.2	75.0	0.4	1.4
	Total	15.9	80.5	0.7	2.9	20.0	78.2	0.6	1.2

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Turning to the employment status of informal buyers, self-employed Croatians are most likely to acquire goods undeclared. More than one quarter of the surveyed self-employed admitted this, which is considerably higher than for dependent employees and the unemployed (18% and 18.2% respectively). Yet, for the purchase of services, dependent employees more frequently did so. As expected based on previous findings, retired individuals represent the category of population that is least prone to such behaviour (Williams and Horodnic, 2016a; Williams and Martinez-Perez, 2014).

There is no apparent link between personal wealth and propensity to purchase in the undeclared economy. Both variables (i.e. the self-assessed financial situation and net income from formal employment) indicate that these are unrelated to the propensity to purchase undeclared. Indeed, the respondents describing their financial situation as 'just comfortable' most frequently engaged. Similarly, those with income around the national average (i.e. earning HRK 5,001-7,500) more often admitted

buying goods undeclared, while for services it was individuals earning between HRK 7,501 and HRK 10,000¹⁰.

Location, however, seems to influence the propensity to purchase undeclared. As Table 3 displays, people from large towns less frequently admitted purchasing undeclared goods and services than those from small towns and rural areas. In addition, people in Istria, Primorje and Gorski Kotar more often purchase undeclared goods and services, followed by citizens from Dalmatia and Slavonia. Such behaviour seems less prevalent in the capital.

Perceptions about the pervasiveness of unregistered economic activities seems to significantly determine whether one engages in such endeavour. The larger the proportion of the population perceived to be engaged in undeclared work, the more likely they themselves are to purchase undeclared goods and services. For instance, while only 8.6% of individuals stating that less than one in twenty Croatian citizens engaged in undeclared work admitted buying undeclared goods, this rises to 22.9% for those who think that at least every second citizen carries out undeclared work. Yet, one must be cautious here as there is probably double causality. That is to say, it is plausible to expect that individuals participating in the undeclared economy would perceive this phenomenon as being more prevalent than the rest of population, simply due to having close relations with other people inside this parallel realm.

As Table 3 indicates, the role of deterrence in influencing the propensity to purchase appears limited. There is no apparent link between the perceived detection risk and purchasing undeclared goods and services. For instance, 15.6% of those believing the

¹⁰ HRK stands for 'Croatian kuna', which is the official currency in Croatia.

risk is very high admitted buying undeclared goods, which is slightly higher than for those anticipating the risk as being fairly high (13.4%) and almost identical to those who think the risk is negligible (15.3%). Although surprising, there is a reasonable explanation for this finding. The question on the perceived detection risk referred explicitly to the supply side (i.e. to the individuals who offer undeclared goods and services), and thus this variable has a limited role in explaining behaviour of purchasers.

The expected sanctions, however, do influence behaviour. While those expecting to pay only taxes and social contributions due if caught, and those who also expect some sort of financial penalty, have fairly similar propensities to purchase undeclared (16.1% and 15.6% respectively for goods, and 20.5% and 20.3% for services), those expecting to be imprisoned have much lower purchasing rates (4.2% for goods and 10% for services). Penalties, therefore, seem an important determinant of the propensity to purchase undeclared goods and services.

The tax morale index, introduced in the previous chapter, and as can be seen in Table 3, is related to the propensity to purchase undeclared. There is a higher tendency of individuals with lower tax morale (i.e. those with higher values of the index) to purchase undeclared goods and services, but with one limitation. Individuals with the lowest tax morale (i.e. with index values between 8 and 10) less frequently admitted purchasing undeclared. One explanation is that this is a small size group. Another is that individuals from this group were far more likely to answer that they do not know whether some of the goods and services they bought were acquired undeclared. As such, the propensity to avoid answering might be higher among individuals

purchasing undeclared goods and services. It is therefore crucial to apply a rigorous statistical approach when analysing this issue.

There is an additional reason to apply statistical methods before drawing conclusions, which was discussed in the previous chapter. It is crucial to scrutinise the demographic, socio-economic and geographic characteristics of those involved in purchasing undeclared goods and services in parallel so as to understand the role of each variable. In other words, the effect of each individual variable can be properly assessed only if controlling for other possible determinants. In the next section, therefore, binary logit modelling is applied to see which of the above variables remain significant when taking into account and controlling for other variables, and which do not, when discussing variables significantly associated with purchasing undeclared goods and services.

[3.2 Determinants of the demand for goods and services in Croatia – findings from the logit modelling](#)

To simplify assessment of the factors driving the purchase of undeclared goods and services, we here do not distinguish between purchase of goods and services. As such, a new (dependent) variable is constructed which has a value of '1' if an individual purchased either undeclared goods or services, and '0' otherwise. This strategy of merging answers from two questions does not undermine the validity of the findings given that there is no considerable difference between demand for goods and demand for services in terms of socio-economic and demographic characteristics of individuals who acquire them (as discussed in section 3.1).

Regarding the explanatory variables used in the logit modelling, it is important to stress that not all variables discussed in the descriptive insight above were included in the analysis. For instance, marital status and the size of one's household had to be excluded owing to the issues with multicollinearity, as both were found to be significantly determined by other covariates (in first line by age and occupation). In addition, a strong correlation between net income and the self-assessed financial situation was detected and therefore one of them had to be omitted. The decision was made to retain the latter, primarily due to smaller number of categories, therefore reducing the number of coefficients to estimate.

Moreover, age and the tax morale index were applied in a significantly different form than it was the case in the descriptive insight above. Since these are both essentially given as interval variables (not as categorical as presented earlier), the original values were used in the logit modelling. This was done not only to increase the ratio of sample size to the number of regression coefficients to estimate, but also to reduce the risk of potential bias arising from existing multicollinearity. Additionally, there was a need to address an issue with a substantial number of missing values for the tax morale index, and therefore using the exact values of the index was a much better option.

In this regard, it must be stated that the problem with faulty answers (Refusal/DK) was addressed by applying multiple imputation technique (Little & Rubin, 2002; Newman,

2014; van Buuren, 2007). In short, 25 values were simulated for each missing answer and the results were later incorporated following the Rubin' s rule (Rubin, 1987)¹¹.

The results of the conducted logit modelling are presented in Table 4. These mostly confirm the descriptive statistics. The only somewhat surprising finding is that gender is not a statistically significant determinant of one' s inclination towards cash-in-hand purchase of goods in services. As can be seen from the presented results (Table 4), women are indeed less likely to rely on informal means of payment than men, but this difference is found to be insignificant.

The analysis further revealed that age also exerts no effect on one' s propensity to purchase goods and services from the undeclared market. Although it might be surprising at first glance, there is a plausible explanation for this outcome. Namely, the descriptive insight indicates that the oldest age cohorts are undoubtedly less likely to participate in this type of illegitimate transaction, while the differences were inconclusive for other groups. The applied logit model indeed confirmed this, but through the employment status. As illustrated, retired individuals are significantly less likely to buy undeclared goods and services than the rest of population, therefore indicating that it is not their age but rather employment status which determines the behaviour of older citizens. Yet, no significant difference in behaviour between other employment status groups was found.

The findings on regional differences in demand for goods and services are also in contrast with what was expected based on the descriptive overview. Even though people living in Istria, Primorje and Gorski Kotar were indeed found to be significantly

¹¹ For more details on the multiple imputation technique see Little and Rubin (2002).

more prone to participate in such illegitimate transactions than their counterparts elsewhere in Croatia, the logit modelling revealed that there is no significant difference between other parts of the country in this respect. This indicates that there are some other peculiarities that distinguish individuals from different parts of the country and which at the same time explain the dissimilarities in the demand for undeclared goods and services between regions. In other words, it seems that the region in which one lives is only an intermediary variable in this respect, not the explanatory factor per se.

The results for the remaining variables confirm expectations based on the descriptive insight. Starting with the size of the community, the analysis shows that people living in larger towns are far less likely to acquire goods and services on an undeclared basis than those living in smaller communities. On the other hand, there is no difference between individuals from small towns and individuals from rural areas in this respect.

Table 4 Determinants of demand for goods and services in Croatia, results of the logit model

	β_i	Standard error
Female	-0.020	0.116
Age	0.005	0.004
Occupation (RC: Unemployed)		
Dependent employee	0.199	0.173
Self-employed	0.441	0.319
Retired	-0.490*	0.216
Inactive (students, disabled, etc.)	-0.142	0.239
Financial situation (RC: Struggling)		
Maintaining	0.005	0.139
Just comfortable	0.252	0.159
No money problems	0.240	0.521
Estimated share of population engaged in UW (RC: More than 50%)		
Less than 5%	-1.580***	0.380
5 to 10%	-1.054***	0.248
10 to 20%	-0.878***	0.203
20 to 50%	-0.257	0.166
Perceived detection risk (RC: Very small)		
Fairly small	0.098	0.145
Fairly high	-0.224	0.171
Very high	-0.181	0.211
Expected sanctions (RC: Tax + social security contributions due)		
Tax + contributions + fine	-0.167	0.128
Prison	-1.044*	0.406
Tax morale	0.163***	0.034
Type of community (RC: Rural area or village)		
Small or middle sized town	0.022	0.131
Large town	-0.593***	0.167
Region (RC: Zagreb and surroundings)		
North Croatia	-0.329	0.204
Slavonia	-0.092	0.194
Lika and Banovina	-0.033	0.248
Istria, Primorje and Gorski Kotar	0.409*	0.197

Dalmatia	0.068	0.179
Const	-0.884**	0.349
Number of observations	2,000	
Number of imputations	25	
Prob > F	0.000	
Pseudo R²	0.075	
Area under ROC	0.683	

Significance: *p<0.05, **p<0.01, ***p<0.001

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Furthermore, the logit analysis revealed that financial situation has no significant effect on purchasing undeclared, while the opposite holds true in the case of the perceived level of participation in undeclared practices. The greater is the perceived prevalence of undeclared work, the greater is the propensity to purchase undeclared. Still, it must be reiterated once again that there is probably a two-way causality here, as those having a direct contact with undeclared work presumably anticipate the phenomenon as being far more prevalent than those who are outside this realm.

Turning to the deterrence effect of policies, the findings endorse the earlier notion that deterrence has quite a limited effect on whether individuals purchase undeclared goods and services. This outcome is not surprising given that the question on the perceived risk was related solely to the supply side of the undeclared economy. Yet, the perceived penalty in the case of being caught is found to be important, at least to the extent that individuals expecting to be imprisoned when detected are significantly less likely to purchase undeclared goods and services than the rest of population.

Finally, the findings reveal that tax morale is indeed highly important. The higher the level of toleration of illegitimate economic practices, the higher is the propensity to purchase undeclared goods and services.

Which goods and services Croatians most frequently buy from the informal market is discussed in the following section, followed by who are the most common suppliers of these goods and services, as well as what factors underlay decisions of the citizens to purchase goods and services from the informal market.

3.3 Some additional aspects of undeclared work in Croatia from demand side

To expand our understanding of the complex mechanisms behind undeclared work in Croatia from the demand side, every individual that admitted purchase of goods and/or services was asked several supplementary questions on this matter. This section gives a descriptive elaboration of these issues.

We start with the exact goods and services that the surveyed individuals acquired on the undeclared basis during 12 months preceding the survey. This particular question was structured as follows:

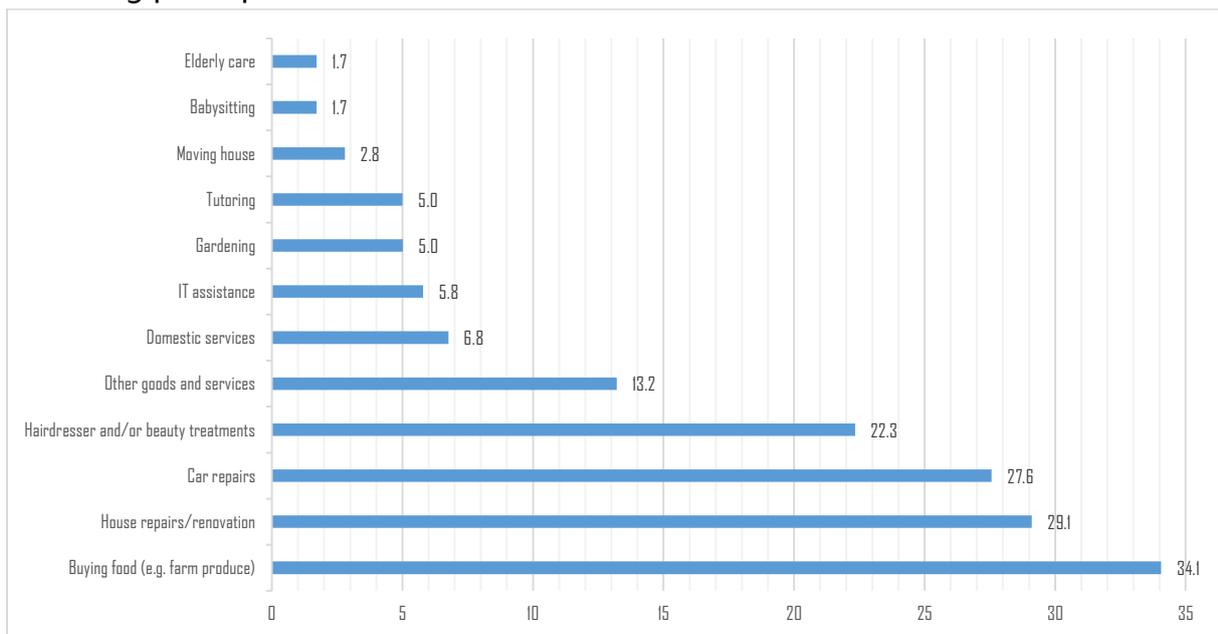
Which of the following goods or services have you paid for during the last 12 months, where you had good reason to believe that they involved undeclared work (i.e. the income was not completely reported to the tax authorities)?

A list of goods and services was offered to assist respondents in answering the question, but each individual was allowed to add a good and/or service that was not on the list. Moreover, multiple answers were possible.

As Figure 12 reveals, food is most often bought by Croatian citizens on an undeclared basis. Approximately one third of the surveyed individuals stated that they had been buying some sort of agricultural products (milk, meat, crops, fruits, etc.) by informal means of payment, which straightforwardly highlights agriculture as the sector with a high incidence of undeclared work. This is followed by various household repairs and renovations, which was mentioned by 29.1% of the respondents. This therefore

suggests that the domestic construction sector is also a potential source of illegitimate labour practices in Croatia.

Figure 12 Goods and services acquired on an informal basis, % of respondents admitting participation from the demand side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

A substantial share of the respondents identified car repairs as another service which they commonly acquire on the informal market, thus placing this activity high on the list when it comes to the prevalence of undeclared work. Some 27.6% of the surveyed purchasers of undeclared goods and services did not ask for a receipt after having their car repaired. This share is much higher than in the case of hairdressers and/or beauty treatments, which was acknowledged by 22.3% of the participants as a service paid on an undeclared basis.

Yet, other offered goods and services seem not to be particularly related to undeclared work in Croatia. For instance, babysitting was mentioned in less than 2%

of cases, and the same applies to elderly care. This, however, confirms findings on the nature and causes of undeclared work in Croatia from other studies, which suggested that Croatians mostly rely on unpaid help of family members and relatives when in need of these two types of activities (Francic & Williams, 2014; Rubić, 2013).

The situation is only slightly different when it comes to other activities conducted in or around one's home. For instance, 5% of individuals admitted paying under-the-table for assistance in their garden, while less than 7% did so for domestic services. Again, self-provisioning and unpaid help are plausible explanations for such a small share of people relying on the undeclared market for these services.

Among other informal transactions mentioned by the respondents (i.e. which were not on the offered list of activities) the most important are payment of services in the catering industry (pubs, restaurants, coffee bars), purchase and chopping of wood, purchase of tobacco and repairs of various electronic devices (TVs, mobile phones, washing machines, etc.).

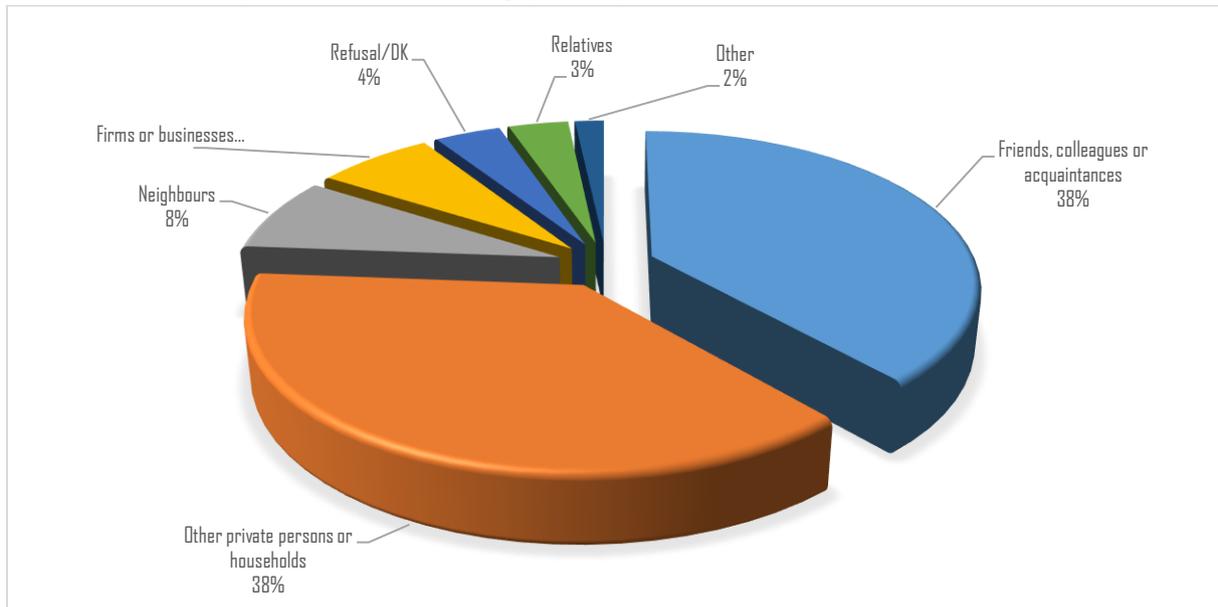
Besides the exact goods and services acquired on the informal market, it was also important to grasp the socio-economic dimension of the mechanisms supporting undeclared work in Croatia. For that reason, every survey respondent who identified themselves as a purchaser of undeclared goods and/or services was instructed to focus on the most important such good/service obtained during the 12-month period preceding the survey so as to answer this question:

Among the following, could you please indicate from whom did you buy this good or service?

Similar to the previous questions, respondents were given a list of potential suppliers, but the option 'other' was also specified in case their answer does not match any of the offered categories. Figure 13 reveals that social ties play an essential role in unregistered economic transactions in Croatia. Namely, almost two out of five undeclared transactions in Croatia assume a close social link between the two parties involved (i.e. friends, colleagues or acquaintances). This outcome is somewhat understandable given that purchase of goods and services from individuals they know reduces the risk for the buyer in case the quality of a product or service is not satisfactory.

However, not all social categories seem to play an important role in this respect. As can be seen from Figure 13, neighbours are mentioned as providers only by 8% of the surveyed individuals, while 3% identified relatives as the people who they bought the good/service from. Unfortunately, it is not possible to say whether this is due to the fact that these two groups of people are rarely compensated for their contribution (i.e. their involvement is most often characterised as help) or whether there is some other explanation for this peculiarity. In any case, one must be careful here as this particular question referred only to the most significant good or service, which therefore gives a partial picture about the state of affairs.

Figure 13 The structure of the suppliers of undeclared goods and services in Croatia, % of respondents admitting participation from the demand side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Leaving this issue aside, Figure 13 further reveals that the second most important category of suppliers are private persons and households without a firm social link with the purchasers (accounting for 38% of unregistered transactions). On the other hand, only 7% of the respondents acknowledged the purchase of goods/services from firms or businesses. This is somewhat expected having in mind the earlier findings on the exact goods and services that are most frequently acquired on an undeclared basis in Croatia.

However, this does not mean that the role of the companies is negligible. It should be reiterated that the survey focused only on private persons and their experience with unregistered economic activities. Since the bulk of undeclared activities assumes firm-to-firm transactions, one must bear in mind that the presented household survey was

able to grasp only one slice of undeclared work (i.e. the transactions in which private individuals were one of the involved parties).

To get an insight into exact rationales for people to rely on informal transactions rather than to acquire goods/services by formal means, buyers were also asked the following question:

From the following, what made you buy it undeclared instead of buying it on the regular market?

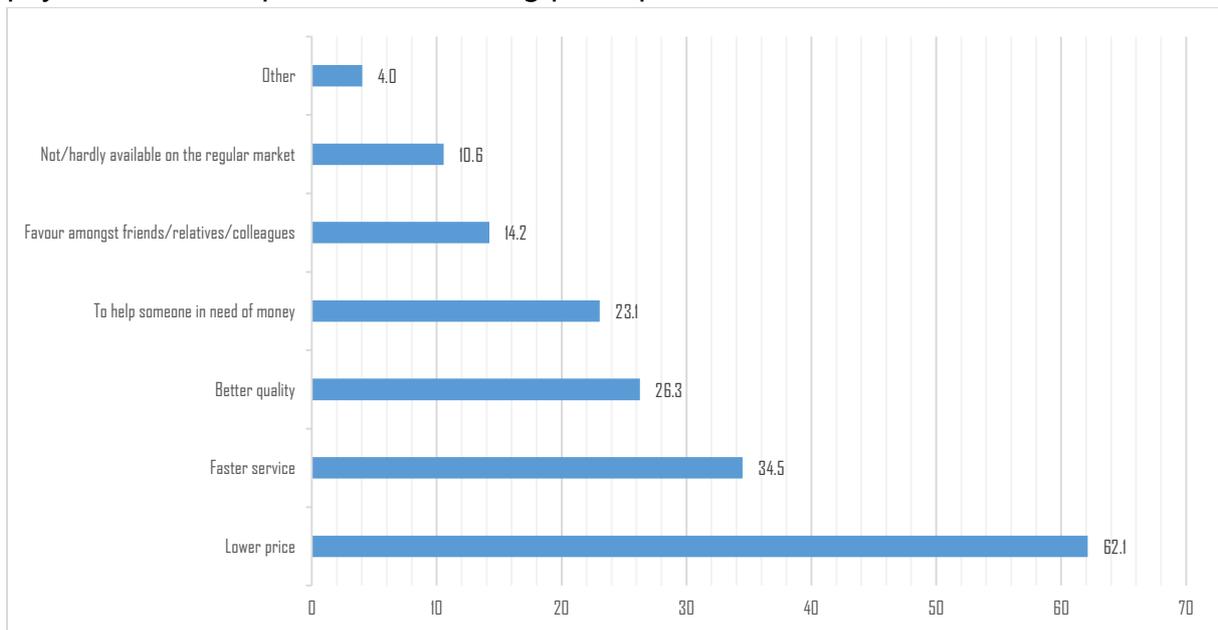
As before, a list of possible rationales was offered. Multiple answers were possible. However, this particular question also referred solely to the most important good or service coming from undeclared work.

Figure 14 reveals that 62% asserted that a cheaper price was their rationale for purchasing undeclared goods and services. The second most important rationale for buyers seems to be a significant reduction of time necessary to obtain a good/service, which was recognised by every third individual as a sufficient reason for the breach of the law. What is more, every fourth survey participant highlighted better quality of goods and services delivered through the informal deals as the main reason for circumventing the legislation (see Figure 14).

It is important to note that the findings on this matter further reinforce the social dimension of undeclared work in Croatia. Almost one quarter stated that they turned

to the undeclared economy simply to help someone in need of money, while for 14.2% the purchase was a favour to their friends, relatives or acquaintances.

Figure 14 An overview of the rationales for relying on undeclared means of payment, % of respondents admitting participation from the demand side



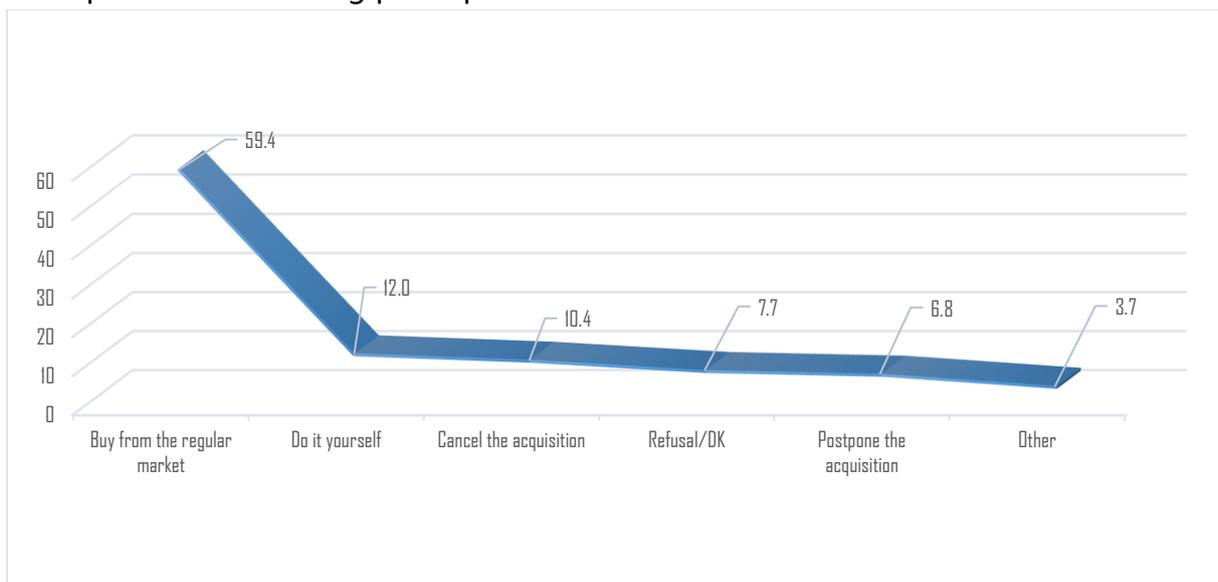
Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Finally, only one in ten respondents justified their behaviour by the fact that the good/service in question was not available on the regular market. This suggests that the undeclared realm in Croatia is a parallel universe (i.e. offering same goods and services under different conditions). This became even more evident after confronting the survey participants with possible shortage of that specific good/service on the informal market. To see what they would do in such circumstances, the informal buyers were asked:

From the following, what would you have done if this good or service had only been available on the regular market?

This time only one answer was allowed. The results on the matter, which are given in Figure 15, reveal that the majority of Croatians would simply switch to the regular market if the good or service they are interested in was not offered by individuals operating inside the undeclared realm. Such an outcome was acknowledged by six out of ten respondents, which therefore confirms that the undeclared economy in Croatia represents a substitute for the regular market, hence offering a quite similar range of goods and services.

Figure 15 Action taken if the good/service was only available on the regular market, % of respondents admitting participation from the demand side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

There is also a group of individuals who would rather rely on self-provision in the case the good or product was not available on the undeclared market (accounting for 12% of all informal purchasers). What is more, approximately 10% of Croatian citizens would cancel the acquisition, while 7% of them would postpone the purchase.

Demand for undeclared goods and services in Croatia – key

- ✓ Demand for undeclared goods and services is driven primarily by values and perceptions of citizens (with tax morale and assessed pervasiveness of the phenomenon in society being the most important drivers).
- ✓ Informal payments are rarely encountered in the case of household services.
- ✓ Friends, relatives and colleagues are the most frequent suppliers.
- ✓ Deterrence has only a limited role in this respect.
- ✓ High social embeddedness of undeclared work.
- ✓ Their financial situation is not a particularly important factor in the decision-making process.
- ✓ Lower price is the most important reason for purchasing undeclared sources

4 Individuals residing between the formal and informal realms – an insight into envelope wage practices in Croatia

Before switching to the supply side of undeclared work in Croatia, it is important to evaluate one specific form of tax evasion that resides half-way between the declared and undeclared realms. Commonly denoted as ‘under-declared employment’ or ‘quasi-formal employment’, this is the practice where a formal employer pays a formal employee an official declared wage but also an additional undeclared (envelope) wage which is decided on the basis of an unwritten agreement beyond the formal written contract (Kedir, Fethi, & Williams, 2011; Sedlenieks, 2003; Williams, 2015b; Williams and Horodnic, 2015b, 2017; Woolfson, 2007). Only one part of the wage is therefore paid officially, while the rest is given under-the-table. Due to the prevalent custom among employers to give this undeclared part of the wage in an envelope, this phenomenon is in research literature also known under the name ‘envelope wage practices’ (Meriküll & Staehr, 2010; Williams, Horodnic, & Windebank, 2015; Williams & Padmore, 2013).

Given the limited knowledge about this illegitimate wage arrangement, both in Croatia and elsewhere, the intention of the household survey was not only to try understanding roots of the problem, but also to grasp some key elements supporting this practice. To do so, the first step was to identify individuals receiving envelope wages. These individuals were then asked a set of questions related to the nature of their employment and their attitudes towards this practice.

Before describing the results, it is necessary to stress one limitation of the approach chosen in the survey. The emphasis was solely on dependent employees as in their

case there are essentially two parties involved in decision about under-declaration (the worker and the employer). That is to say, self-employed individuals were not included. In line with this limitation, one must be aware that under-declared practices are more prevalent in Croatia than the results presented in this part of the report will suggest.

This chapter starts with discussion about demographic, socio-economic and geographic features of envelope wage practices in Croatia, which is given in the first section. The second section then brings a more detailed insight into the nature of such employment.

[4.1 The structure of under-declared workforce - a descriptive overview](#)

As already mentioned, only the individuals who identified themselves as being formally employed under classical employment relations (part-time or full time dependent employees) were asked questions on envelope wage practices. While this approach enabled an insight into the complex structure of employer-employee relations in employment assuming under-declaration of wages (which does not exist in the case of self-employment), this came at the cost of the sample size. Only 47 under-declared workers were identified in Croatia by the survey, which is a rather insufficient number of cases for a robust statistical analysis. For that reason, the overview of under-declared workforce in Croatia will be done strictly in a descriptive manner.

The first question asked was as follows:

Sometimes employers prefer to pay all or part of the regular salary or the remuneration for extra work or overtime hours cash-in-hand and without declaring it to tax or social security authorities. Did your employer pay you all or part of your income in the last 12 months this way?

In total, 6.6% of the surveyed dependent employees admitted receiving more than stated in their formal written contract, while 2% refused to answer this question and further 0.4% indicated they did not know. A detailed overview of the findings is given in Table 5. The first thing to notice from the given summary is that men more frequently admitted engagement in this illicit wage practice. While 7.7% of men stated they earn more than is declared to the authorities, only 5.5% of women did the same. This difference between genders is probably even more pronounced having in mind that men were more frequent to avoid providing the exact answer. Some 3.3% of men refused to answer or argued they do not know the answer, which is much higher than for women (1.3%).

As expected, younger individuals seem to be more susceptible to this type of employment than older employees. However, one must be careful here since the share of individuals between 15 and 24 years of age engaged in under-declared employment is evidently inflated. This is a pure consequence of the limited size of the sample on the one hand and the fact that only one part of people in the youngest age category are actually eligible for work on the other hand. Accordingly, it is reasonable to assume that the role of experience in development of this practice is not as pronounced as suggested by the results of the survey.

Yet, the comparison of the remaining age cohorts clearly indicates that age is indeed an important driver of under-declared employment in Croatia. For instance, while 8.4% of individuals between 25 and 34 years of age admitted receiving more than is written in their work contract, this reduces to 2.3% among individuals aged 55-64. This finding is in line with the situation in other European countries (Kedir et al., 2011; Williams et al., 2015b).

When it comes to marital status, Table 5 indicates that married individuals are less inclined to engage in under-declaration of wages than others. Only 3.3% of married participants identified themselves as quasi-formal workers, while this ratio accounts for more than 11% in the case of single and divorced people. Yet, akin to the situation with age, here we again have a problem with inflated numbers caused by small sample size. Namely, since there is no reason to assume that widowed individuals would be substantially more predisposed for under-declaration than the remaining groups (as suggested by the survey), such a high result for this category certainly does not reflect the situation in practice.

The findings further suggest that individuals in larger households have a higher participation rate in envelope wage practices. For instance, while the participation rate for people whose household counts up to two members is below 6%, this increases to 7.5% when there are more than three people in the household.

Turning to the type of economic activity, it seems that agriculture (28.3%) and construction (16.1%) are the sectors facing the most profound problems with under-declaration of wages in Croatia. Under-declaration is also prevalent among employees conducting various household services (15.5%) and those working in the

hospitality sector (9.4%). On the other hand, the lowest frequency of quasi-formal workers was recorded among individuals engaged in transport of goods (3.2%), as well as among those conducting various personal services (3.1%).

Table 5 Structure of under-declared workers in Croatia, % of surveyed dependent employees

		Yes	No	Refusal	DK
Gender	Male	7.7	89.0	2.4	0.9
	Female	5.5	93.2	1.3	0.0
Age	15 – 24	22.3	75.7	2.0	0.0
	25 – 34	8.4	91.2	0.4	0.0
	35 – 44	5.1	90.9	3.4	0.6
	45 – 54	3.5	94.5	1.4	0.6
	55 – 64	2.3	93.2	3.5	1.0
	65+	0.0	100.0	0.0	0.0
Marital status	(Re)Married	3.3	94.6	1.6	0.5
	Cohabiting	8.6	87.1	4.3	0.0
	Single	11.6	87.1	1.3	0.0
	Divorced	11.3	84.5	1.8	2.4
	Widowed	16.2	83.8	0.0	0.0
Household size	One	5.8	93.2	1.0	0.0
	Two	5.6	90.5	3.1	0.8
	Three	6.8	91.7	0.9	0.6
	Four or more	7.5	89.9	2.2	0.4
Sector	Construction	16.1	79.4	4.5	0.0
	Industry	6.7	90.1	3.2	0.0
	Household services (incl. gardening, child and elderly care)	15.5	84.5	0.0	0.0
	Transport	3.2	89.1	7.7	0.0
	Personal services	3.1	93.2	2.0	1.7
	Retail	7.5	90.7	1.8	0.0
	Repair services	0.0	100.0	0.0	0.0
	Hospitality (hotels, restaurant, cafes)	9.4	89.7	0.9	0.0
	Agriculture	28.3	58.2	13.5	0.0
Other	4.2	94.8	0.6	0.4	
Type of contract	Full-time	6.8	90.7	2.0	0.5
	Part-time	0.0	100.0	0.0	0.0
Financial situation	Struggling	10.0	87.8	1.5	0.7
	Maintaining	7.3	91.5	1.2	0.0
	Just comfortable	3.6	92.3	3.2	0.9
	No money problems	0.0	100.0	0.0	0.0
Estimated share of population engaged in UW	Less than 5%	5.4	90.0	4.6	0.0
	5 to 10%	4.3	93.8	0.5	1.4
	10 to 20%	2.8	96.1	0.4	0.7
	20 to 50%	8.8	89.5	1.7	0.0
	50% or more	12.8	76.5	9.1	1.6
Perceived detection risk	Very small	7.6	89.0	2.7	0.7
	Fairly small	7.2	90.8	1.6	0.4
	Fairly high	5.4	92.9	1.0	0.7
	Very high	7.5	92.5	0.0	0.0
Expected sanctions	Tax + contributions	5.2	91.4	2.5	0.9
	Tax + contributions + fine	7.9	91.0	1.1	0.0
	Prison	0.0	100.0	0.0	0.0
Tax morale	<2	5.6	92.4	1.8	0.2
	2-4	7.5	90.6	1.9	0.0
	4-6	7.3	88.8	3.9	0.0
	6-8	11.5	78.5	0.0	10.0
	8-10	42.8	57.2	0.0	0.0

Type of commun.	Rural area or village	7.1	90.6	1.4	0.9
	Small or middle sized town	6.2	90.5	3.3	0.0
	Large town	6.6	92.0	0.8	0.6
Region	Zagreb	5.7	93.0	1.3	0.0
	North Croatia	10.9	85.5	1.7	1.9
	Slavonia	3.4	96.6	0.0	0.0
	Lika and Banovina	6.0	94.0	0.0	0.0
	Istria, Primorje and Gorski Kotar	8.0	90.4	1.6	0.0
	Dalmatia	5.7	87.9	5.5	0.9
Total		6.6	91.0	2.0	0.4

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

An interesting finding is that all individuals who admitted receiving higher wages than declared to the authorities were in fact full-time employees. It must be, however, emphasised that the question on the type of the job (full-time vs part-time) was concerned with the situation in reality, not in their contract. It is thus possible that many workers who were officially part-time workers were in fact working on a full-time basis. Indeed, the discussion presented in the next section will disclose an evident link between the working time of a worker and their propensity to receive envelope wages.

Before that, it is important to inspect other aspects of this practice in Croatia. Starting with financial situation, Table 5 indicates that under-declared workers are far more likely to face difficulties making ends meet. This practice was not recorded among dependent employees having no money problems at all, while only 3.6% describing their financial position as 'just comfortable' admitted to receiving envelope wages. On the other hand, one out of ten survey respondents struggling to pay their financial liabilities received envelope wages. Yet, although this finding undoubtedly confirms an association between under-declared employment and personal wealth, it says nothing about the direction of causality. Namely, it is possible that under-declaration of wages is actually a cause of a poor financial situation for many workers, not a

consequence. Nonetheless, it is not possible to test which direction is true based on the available data.

Tax morale also seems to be positively correlated with one's propensity to receive envelope wages, while deterrence appears not to be particularly important for workers. With respect to the perceived prevalence of undeclared work (i.e., horizontal trust), the share of under-declared workers gradually increases from 5.4% (among those who think that less than 5% of population operates undeclared) to 12.8% (for those believing that the majority operate undeclared). Similarly, while 5.6% of individuals with the highest level of tax morale participate in the quasi-formal realm, this increases to 11.5% for those mostly tolerating noncompliant behaviour¹². Yet, a note of caution is required. It is reasonable to assume that two-way causality is in place for both variables: the very fact that someone works on an under-declared basis possibly leads them to conclude that disobedience with the legislation is more frequent in society than it really is, as well as to express greater tolerance towards such behaviour.

When it comes to the perceived risk of being detected, the findings indicate that individuals who think the risk is very high were slightly more likely to admit receiving envelope wages (7.5%) than those who think the risk is fairly small (7.2%). Under-declaration of wages also appears to be more common among dependent employees who are certain that a financial fine will result alongside taxes and contributions due if caught (7.9%) than among those who do not expect any additional penalty (5.2%). A plausible explanation for this rather unusual finding is that employees do not

¹² Due to the plausible inflation of numbers related to the individuals with the lowest tax morale, they are not discussed here.

consider themselves as being responsible for under-declaration and therefore expect that their employer is the only one which will be prosecuted by the authorities.

Finally, there are regional differences with regards to the prevalence of under-declared employment. Envelope wage practices are most prevalent in North Croatia (10.9%), followed by Istria, Primorje and Gorski Kotar (8.0%). On the other hand, Slavonia is the region where this phenomenon appears to be least rooted, since only 3.4% of participants from that part of Croatia admitted receiving envelope wages. However, although the results presented in Table 5 reveal that people living in rural areas are somewhat more frequently engaged in this practice than those from towns, the difference is not so substantial to enable firm conclusions in this respect.

Having enumerated these characteristics of quasi-formal employment in Croatia, we now move to a more detailed insight into the mechanisms behind this illegitimate arrangement. As explained earlier, the survey respondents identifying themselves as quasi-formal workers were asked several additional questions, which were directly related to that particular job. The next section reports the most important findings.

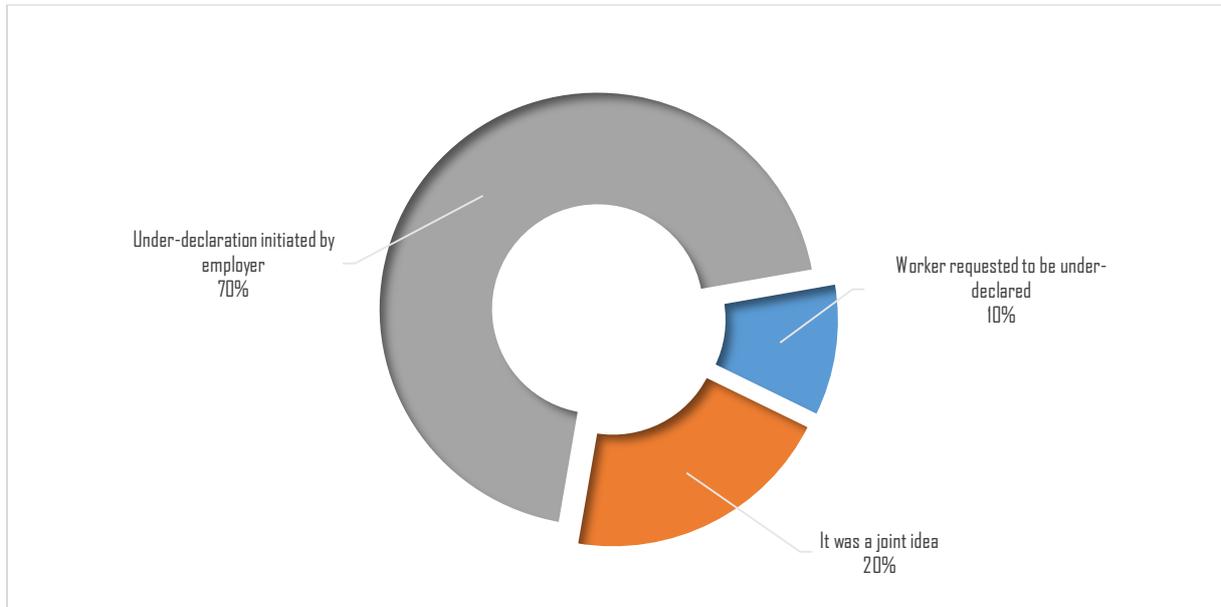
4.2 The most important characteristics of quasi-formal employment in Croatia

Since under-declared employment is in fact a result of mutual agreement between a worker and their employer, it is interesting to see to what extent each of the two parties drives this practice in Croatia. To start unfolding this issue, every quasi-formal worker was asked the following question:

Who suggested paying this additional salary which would not be declared to the authorities?

As anticipated, three different answers were possible: the employer initiated the arrangement; the worker requested to be under-declared; and under-declaration was a joint idea. As Figure 16 reveals, under-declaration in Croatia is most commonly an initiative of the employer in seven out of every ten cases encountered. This finding is not surprising given that the benefits employers have from this type of noncompliance significantly outweigh their cost, which cannot be claimed to hold true for workers (Hazans, 2005; Round, Williams, & Rodgers, 2008; Sedlenieks, 2003; Woolfson, 2007).

Figure 16 Under-declared employment in Croatia by initiator, % of envelope wage earners



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

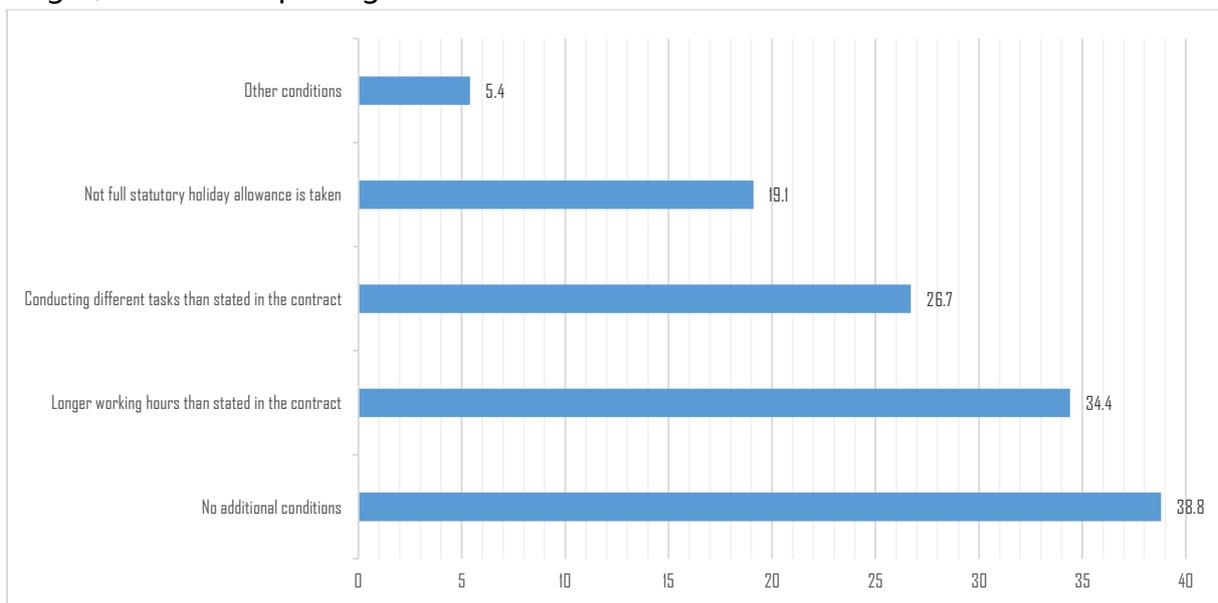
Yet, it seems that many Croatian workers do find their own interest in concealment of one part of their wages. As a matter of fact, 30.5% of the identified quasi-formal workers confirmed that they were active initiators of this arrangement. Yet, in most cases this was a joint idea, while only a small proportion of such arrangements was done exclusively on the initiative of the employee (accounting for 10.1% of the total quasi-formal workforce).

The next step to understand the motivation of the involved parties for engaging in this illicit wage practice was to evaluate the nature of the hidden agreement between them. To do so, every quasi-formal worker was also asked this question:

Did you verbally agree with your employer to any of the following conditions in return for receiving this additional cash-in-hand payment?

A set of plausible extra conditions was offered and every respondent was allowed to choose more than one answer. As Figure 17 reveals, in 38.8% of cases, no additional conditions were attached to the receipt of an additional undeclared envelope wage. This therefore suggests that in a substantial proportion of cases under-declaration is probably nothing more than a simple tax evasion strategy by employers.

Figure 17 An overview of extra conditions that accompanied under-declaration of wages, % of envelope wage earners



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

In majority of cases, however, there was indeed one or more additional conditions attached to the receipt of envelope wages. Every third worker receiving an envelope wage was asked to work longer hours than is in their official contract in return for their envelope wage. A quarter receiving envelope wages also mentioned that they were asked to conduct different tasks than those stated in their formal work contract. Finally, approximately one in five under-declared workers in Croatia were expected not to take their full statutory holiday allowance, which indicates the exploitative nature of quasi-formal employment in this South-East European country.

Turning to the undeclared part of the wage, two different questions were asked, one aimed at examining the exact function of envelope wages, while the other was concerned with the exact share of the total wage that remains undeclared. The first question was structured as follows:

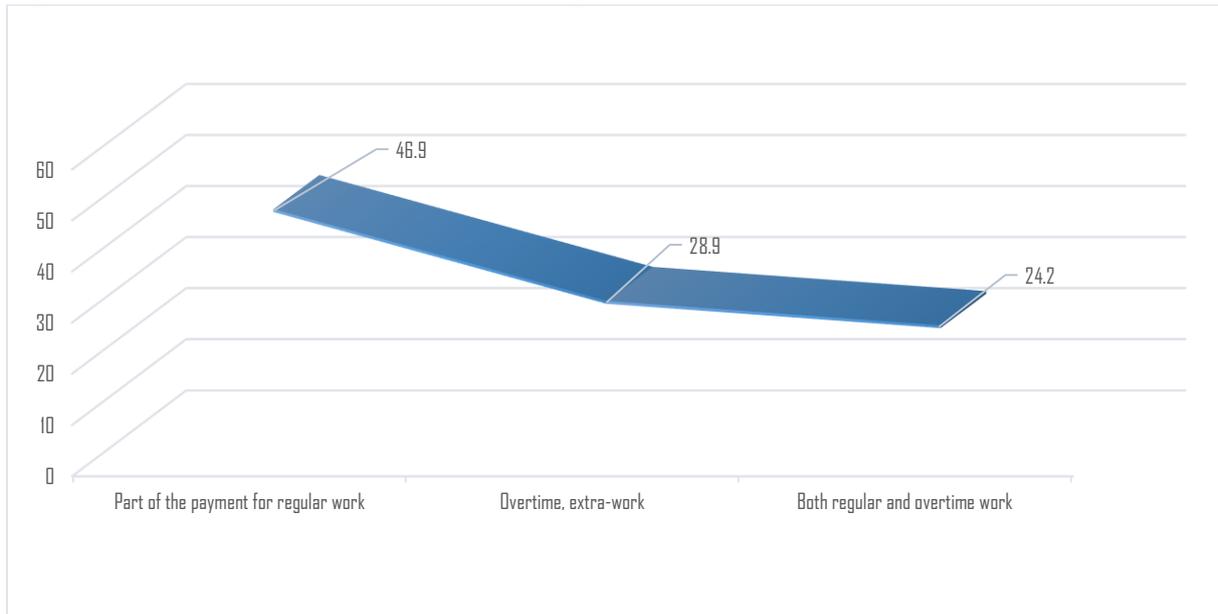
Was this income part of the remuneration for your regular work, was it payment for overtime hours or was it both?

The results summarised in Figure 18 reveal that in almost one half of the cases, envelope wages represented nothing more than one part of the total payment for regular work. This further reinforces the notion that quasi-formal employment in Croatia primarily serves as an efficient tax evasion strategy. That is to say, it seems that the majority of employers simply divide the agreed take-home pay of their workers into two parts, whereas taxes and social security contributions are not paid on the slice that remains underreported.

Yet, in 28.9% of cases envelope wages actually represented remuneration for work beyond the one stated in the contract. Such a prevalence of cash payments for overtime and/or extra work suggests that for many employers in Croatia this illegitimate practice also serves as an efficient means of circumventing certain aspects of labour legislation. Yet, this could also indicate that reliance on envelope wages actually represents a useful strategy to cope with business fluctuations, as the practice gives a possibility for employers to increase workload of the existing personal (which would be paid in cash) instead of employing new workers in the case of

temporary growth in demand. Finally, every fourth quasi-formal employee stated that their envelope wages covered both regular and overtime work (see Figure 18), which presumably makes it very hard for them to draw a line between invested efforts and received take-home pay.

Figure 18 The exact role of envelope wages, % of quasi-formal workers



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

The second question was concerned with the relative size of envelope wages, as follows:

Approximately what percentage share of your net monthly income from this job did you get this way?

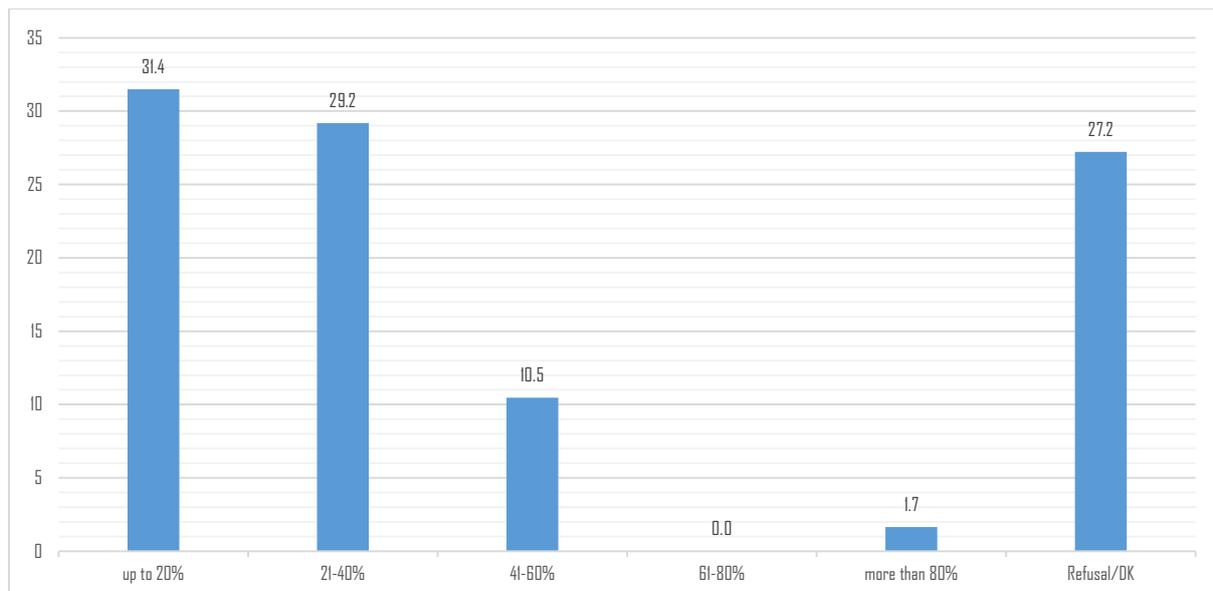
As However, it is interesting that a large proportion of individuals did not give a clear answer to this question. While such a large proportion of 'refusals' is not so

surprising given the sensitivity of the question, this cannot be said in the case of 'do not know' answers. The latter probably indicates significant variability in the size of envelope wages from one month to another, which made it impossible for many survey participants to give a reasonable estimate. Indeed, this reasoning is in line with the outcomes from the preceding question, which revealed that envelope wages are closely related to overtime work for great many quasi-formal workers in Croatia.

Figure 19 displays, 31.4% of quasi-formal workers stated that up to 20% of their take-home pay was given in cash, while for a further 29.2% of them cash payments comprised 21-40% of the earnings. On the other hand, only 10.5% of the surveyed envelope wage earners specified that the unreported parts of their wages were as high as or even slightly larger than the declared net income. As expected, situations in which the declared wage represents just a minor part of the total remuneration are extremely rare in practice.

However, it is interesting that a large proportion of individuals did not give a clear answer to this question. While such a large proportion of 'refusals' is not so surprising given the sensitivity of the question, this cannot be said in the case of 'do not know' answers. The latter probably indicates significant variability in the size of envelope wages from one month to another, which made it impossible for many survey participants to give a reasonable estimate. Indeed, this reasoning is in line with the outcomes from the preceding question, which revealed that envelope wages are closely related to overtime work for great many quasi-formal workers in Croatia.

Figure 19 The proportion of total net income received in cash, % of quasi-formal workers



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

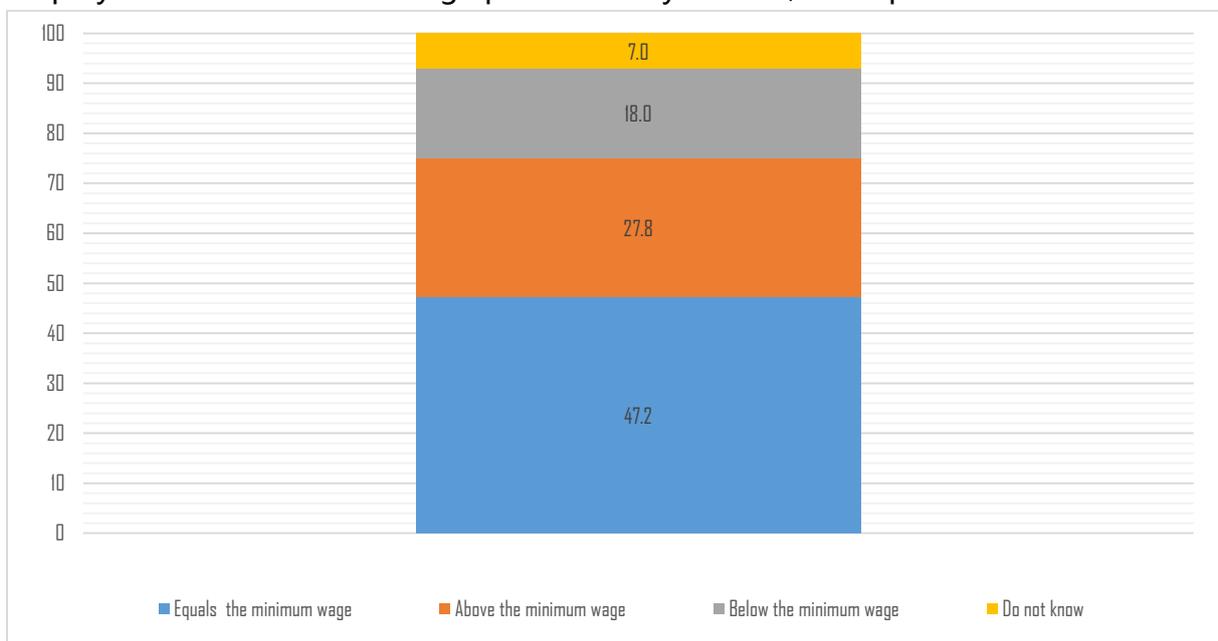
A further important issue is the link between envelope wage practices and the legislation on minimum wage. Namely, there has been a prevalent belief among academics and experts that employers most often tend to satisfy only the minimum required by the law in terms of official payment, therefore identifying low income earners as the ones being most susceptible to envelope wage practices (Elek, Köllő, Reizer, & Szabó, 2011; OECD, 2003). To test the validity of the above statement for Croatia, envelope wage earners were also asked the following question:

Which of the following best describes your officially gross declared salary for this job:

- the salary equals the minimum wage;*
- the salary is above the minimum wage;*
- the salary is below the minimum wage?*

The interviewers were instructed to clearly state the exact size of the minimum wage for 2015 in case the respondent had not known that information. The outcome is that the behaviour of employers relying on envelope wages in Croatia is indeed substantially determined by the legislation on minimum wage. As Figure 20 illustrates, almost one half of the quasi-formal workers received exactly the minimum prescribed amount as their declared wage.

Figure 20 Relation between the declared part of the wage within quasi-formal employment and minimum wage proscribed by the law, % of quasi-formal workers



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

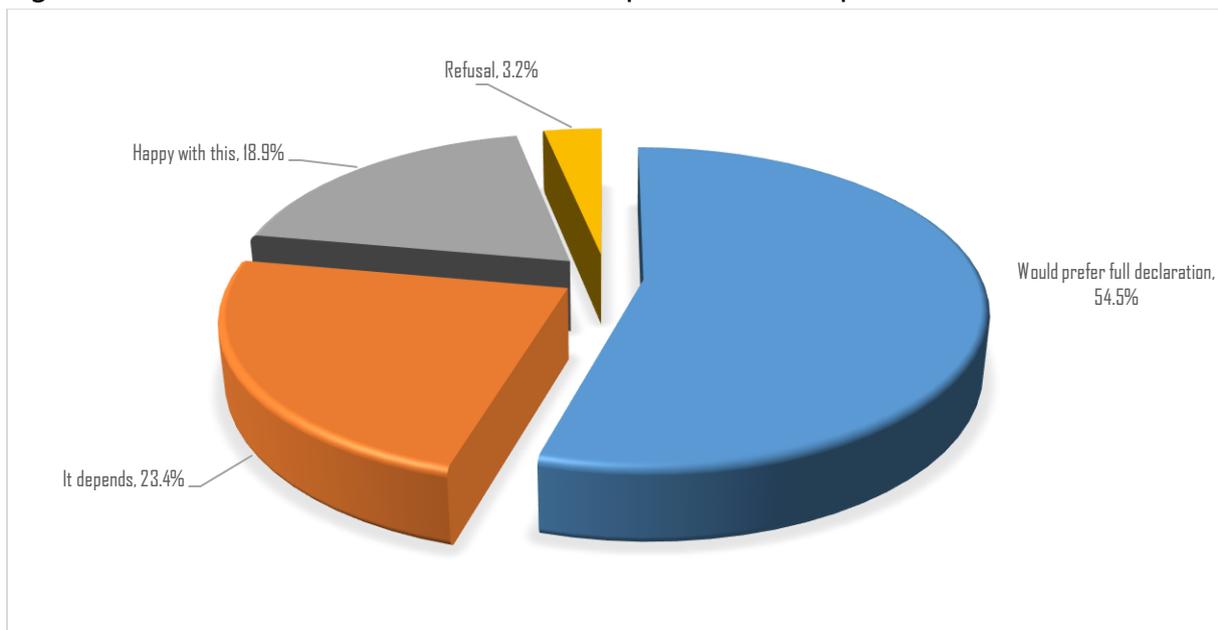
A further 27.8% of quasi-formal workers recognised that their declared wage was higher than proscribed by the law, while 18% classified their official part of the wage as being below the minimum. The latter are essentially those registered as part-time workers.

The last matter to scrutinise is employees' attitudes to receiving an envelope wage, as reflected in the following question:

Were you happy getting part of your salary without having it declared to the tax or social security authorities or would you have preferred to have had your total gross salary declared?

As Figure 21 reveals, the majority believe that the negative aspects of this practice outweigh all benefits that it brings to them and therefore would rather prefer full declaration. This further reinforces the earlier finding that this practice is more beneficial for employers. Yet a non-negligible prefer being paid in this manner; 18.9% described being paid in this manner as positive, implying that they are happy with this arrangement. Finally, almost every fourth employee paid in this manner was not sure whether they are in better position than their counterparts who are completely declared.

Figure 21 The level of satisfaction with own position, % of quasi-formal workers



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Envelope wage practices in Croatia – key facts

- ✓ 6.6% of dependent employees in Croatia receive envelope wages.
- ✓ This practice is more frequent among men and younger individuals.
- ✓ Agriculture and the construction industry are highly susceptible to such arrangements.
- ✓ Under-declaration is mostly initiated by employers.
- ✓ Envelope wages commonly comprise up to 40% of the total net income.
- ✓ Every second quasi-formal employee receives the minimum wage as their declared wage.
- ✓ Most workers would prefer to be fully declared.

5 Supply side of undeclared work in Croatia

The survey component examining the supply of undeclared work was designed in a similar manner to the previous issues. In the first step every single respondent was asked whether they had been conducting any paid activity without reporting income to the authorities. Those who answered positively were then asked a set of supplementary questions in order to get an in-depth insight into this practice from the perspective of workers.

The structure applied here is thus identical to that pursued in Chapter 4. First we give a descriptive overview of undeclared workers according to their demographic and socio-economic characteristics. In the second stage the issue is further examined by applying logit modelling so as to determine which of those characteristics indeed play a significant role in the decision-making process of workers in this respect. The discussion is then continued by summarising the most important findings on the exact goods and services provided, main motivations of workers to engage in undeclared work, as well as on the people who bought these goods and services and the income generated by informal means of payment.

5.1 The structure of undeclared workforce in Croatia – a descriptive overview

To assess engagement in undeclared work in Croatia, the following question was asked:

Did you yourself carry out any undeclared paid activities in the last 12 months? Here we mean again activities which you were paid for which were not or not fully reported to the tax authorities.

In total, 9.2% of the surveyed individuals admitted to have been engaged in some sort of undeclared work during the year prior to the survey. A further 1.6% refused to answer, while 0.6% did not know whether they were carrying out such activities. Finally, 88.6% of the research participants denied participation in undeclared work. A detailed overview of the matter is given in Table 6. Starting with the demographic characteristics, 12.9% of men acknowledged engagement in undeclared work, but just 5.8% of women. That is to say, men were some 2.2 times more frequent to admit conducting unregistered activities than women. The difference is probably even more pronounced as men more often refused to answer.

Table 6 further reveals that the youngest age groups much frequently carry out unregistered economic activities than older members of society. Undeclared work was admitted by 14% of the surveyed individuals between 15 and 24 years of age, which is substantially more than in the case of population aged 25-44 (10.9%). On the other hand, only 6.5% of the individuals from the age cohort 55-64 classified themselves as undeclared workers, while this share was even lower for those above 65 years of age (3.1%).

Yet the findings on the link between marital status and propensity to participate in undeclared work from the supply side do not reveal any clear pattern. Interestingly, one in five individuals in cohabitation carried out some unregistered activity during

the last 12 months, which represents a substantially larger prevalence of this practice than in any other group. In comparison, the participation rate for single people, which is the second most frequent group, is 11.5%. Unfortunately, it is not possible to explicate reasons behind this peculiarity based on the available data. Whatever the reason, it is worth mentioning that married and widowed individuals were identified as the least likely to work undeclared, with unregistered workforce accounting only for 7.2% and 4.2% of the total population within these two groups respectively.

When it comes to household size, one can see that large households are more likely to have participants engaging in undeclared work. For instance, while only 6% of respondents sharing their household with one person answered positively to this question, this share accounted for 11.8% in the case of people living with three or more people under the same roof.

Employment status is important. It is noticeable from Table 6 that unemployed individuals are more likely to work undeclared; 17.8% of the individuals excluded from the regular labour market admitted to carrying out unregistered activities, which further reinforces the earlier conclusion that the undeclared economy in Croatia to a large degree represents a substitute for the formal economy.

The second most susceptible employment status group in this respect are self-employed individuals, 11.3% of whom identified themselves as participants in the undeclared realm. They are followed by inactive individuals (mainly students), with a participation rate of 10.9%. On the other hand, this rate is much lower for dependent employees (8.6%), who less frequently work on an undeclared basis than the

aforementioned groups. Finally, undeclared work is least common among pensioners, as only 4.6% of them admitted such behaviour.

Table 6 Suppliers of undeclared goods and services in Croatia, % of surveyed individuals

		Yes	No	Refusal	DK
Gender	Male	12.9	84.4	2.3	0.4
	Female	5.8	92.5	0.8	0.9
Age	15 - 24	14.0	84.2	0.7	1.1
	25 - 34	10.9	85.9	2.5	0.7
	35 - 44	10.9	85.7	2.5	0.9
	45 - 54	11.7	86.8	1.5	0.0
	55 - 64	6.5	91.8	1.1	0.6
	65+	3.1	95.0	1.2	0.7
	Marital status	(Re)Married	7.2	90.5	1.8
	Cohabiting	19.6	75.7	4.0	0.7
	Single	11.5	86.7	1.0	0.8
	Divorced	8.4	90.5	0.0	1.1
	Widowed	4.2	95.0	0.0	0.8
Household size	One	8.3	90.2	0.8	0.7
	Two	6.0	91.9	1.7	0.4
	Three	10.2	87.7	1.8	0.3
	Four or more	11.8	85.4	1.7	1.1
Occupation	Dependent employee	8.6	88.3	2.4	0.7
	Self-employed	11.3	87.5	1.2	0.0
	Unemployed	17.8	80.3	1.4	0.5
	Retired	4.6	93.9	0.9	0.6
	Inactive (students, disabled, etc.)	10.9	87.3	0.8	1.0
Financial situation	Struggling	11.1	87.1	1.1	0.7
	Maintaining	7.7	90.0	1.6	0.7
	Just comfortable	8.3	89.1	2.1	0.5
	No money problems	14.4	81.4	4.2	0.0
Net income from formal work	0	14.1	84.8	0.8	0.3
	1-2,500	9.5	89.5	0.6	0.4
	2,501-5,000	7.7	90.1	1.4	0.8
	5,001-7,500	8.1	90.8	1.1	0.0
	7,501-10,000	4.0	96.0	0.0	0.0
	10,001-15,000	15.2	84.8	0.0	0.0
	More than 15,000	0.0	100.0	0.0	0.0
Estimated share of population engaged in UW	Less than 5%	1.9	95.1	3.0	0.0
	5 to 10%	4.5	93.9	0.6	1.0
	10 to 20%	7.3	91.0	1.2	0.5
	20 to 50%	11.3	86.9	1.4	0.4
	50% or more	14.7	81.1	3.9	0.3
Perceived detection risk	Very small	9.6	88.1	1.6	0.7
	Fairly small	9.7	88.5	1.5	0.3
	Fairly high	7.3	90.6	1.1	1.0
	Very high	10.6	88.8	0.0	0.6
Expected	Tax + contributions	10.1	88.1	1.6	0.2

	Tax + contributions + fine	8.1	90.4	1.2	0.3
	Prison	6.4	91.9	0.0	1.7
Tax morale	<2	7.2	91.3	1.0	0.5
	2-4	11.4	85.6	2.1	0.9
	4-6	15.8	78.7	4.7	0.8
	6-8	16.8	81.0	2.2	0.0
	8-10	14.1	85.9	0.0	0.0
	Type of commun.	Rural area or village	10.6	87.3	1.4
Small or middle sized town		9.1	88.0	2.1	0.8
Large town		7.0	91.6	1.0	0.4
Region	Zagreb	7.5	90.6	1.0	0.9
	North Croatia	10.2	88.0	0.9	0.9
	Slavonia	12.8	86.4	0.8	0.0
	Lika and Banovina	6.0	91.6	1.4	1.0
	Istria, Primorje and Gorski Kotar	12.2	85.0	2.8	0.0
	Dalmatia	6.9	89.6	2.7	0.8
Total		9.2	88.6	1.6	0.6

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

When it comes to the link between financial status and propensity to participate in the undeclared economy, findings are in line with those from other transition countries (see Ferrer-i-Carbonell & Gërkhani, 2011). Namely, citizens placed on the two extremes in terms of financial position seem to far more frequently engage in undeclared work than the rest of population. As Table 6 reveals, individuals without any financial problems were the group of citizens with the highest participation rate (14.4%). This is much higher even than for those who were struggling to survive on a daily basis (11.1%). However, both these groups appear to be far more frequently engaged in undeclared work than the members in the middle.

A similar conclusion is reached when examining how net income is related to the propensity to work on an undeclared basis. Again, two peripheral groups dominate in this respect. Yet, while the participation rate of 14.1% for those that do not conduct any formal work is not so surprising given the earlier findings on the association

between unemployment and undeclared work, the fact that 15.2% of the individuals earning more than HRK 10,000 in the formal economy also participate in the informal realm reveals quite a lot about the exact role of undeclared work in Croatia¹³. More precisely, based on these findings one can argue that undeclared work in Croatia actually has a twofold role: on the one hand, it enables relatively well-off individuals to earn even more money. On the other hand, the undeclared economy seems to absorb the army of individuals excluded from the formal market, who are forced to accept low-paid unregistered jobs simply to make their ends meet.

The findings on attitudes are quite similar to those for the demand side of undeclared work and envelope wage practices. Starting with the estimated pervasiveness of unregistered economic activities, this factor indeed seems to be substantially associated with one's propensity to engage in undeclared work. Table 6 displays that less than 2% of individuals who think that disobedience with tax and labour legislation is a negligible issue in Croatia were personally engaged in such behaviour, while this share gradually rises to 14.7% for those who think that not many people can be trusted in this respect. As before, one must however be aware that the opposite direction is also plausible, i.e. that those who are working on an undeclared basis tend to perceive this practice as more prevalent than it really is.

A similar state of affairs is detected in the case of tax morale, as there is an evidence that a decrease in tax morale results in an increased inclination to engage in cash-in-hand activities. While 7.2% of the individuals with the highest tax morale admitted to participate in the undeclared economy, this was 11.4% among those with the values

¹³ The average net wage in 2015 accounted for HRK 5,711 (Croatian Bureau of Statistics, 2016b). In addition, only 6.6% of persons in employment were earning more than 10,000 at that time (Croatian Bureau of Statistics, 2016a), which classifies this group as 'wealthy individuals'.

of the index between two and four. The participation rate further increases with decline of tax morale, as evident when inspecting the results for individuals whose index falls in the interval 4-6 (15.8%) and 6-8 (16.8%).

Turning to the effect of policy measures, the findings once again suggest that only the perceived penalties possibly play an important role in this regard. The participation rate reduces to approximately 2% with the increase of the perceived penalty. While 10.1% of those who do not expect any additional penalty besides taxes and social security contributions due admitted participation in the undeclared realm, this share accounted for 8.1% for the category of people expecting a financial fine. Only 6.4% of individuals who believed that one can be imprisoned if caught were identified as undeclared workers.

On the other hand, the perceived detection risk seems to be quite irrelevant. The highest proportion of undeclared workers was identified among individuals who believed that this risk is very high (10.6%). In comparison, those who think the risk is negligible have a participation rate of 9.6%.

Finally, the results also suggest that undeclared work is most common in rural areas of Croatia. More than one in ten respondents in rural areas had been carrying out some unregistered activities during the 12-month period prior the survey. The participation rate for small and middle sized towns was 9.1%, while only 7% of the citizens living in large towns relied on unregistered sources of income.

This state of affairs is also reflected in the regional distribution of undeclared work. As Table 6 shows, undeclared work is most prevalent in Slavonia (12.8%), as well as in Istria, Primorje and Gorski Kotar (12.2%). On the other hand, the findings suggest that

Lika and Dalmatia face much less pronounced problems with the supply of undeclared goods and services than other parts of the country, with participation rates accounting for 6.0% and 6.9% respectively in these two regions.

However, it is not possible to make firm conclusions about the effect of the demographic, social-economic and geographical variables on the propensity to participate in undeclared work simply based on this descriptive overview. This can only be done using a rigorous statistical approach, which scrutinises these covariates in parallel. In line with this, the next section brings the results of the logit modelling, with a binary indicator denoting whether or not a person participated in the undeclared economy being the dependent variable.

[5.2 Determinants of the propensity to carry out undeclared work in Croatia – findings from the logit modelling](#)

Before presenting the results, it is important to stress that the approach applied here completely matches the one pursued in section 3.2. First of all, marital status, size of one's household and net income from formal work were again omitted due to multicollinearity issues, which resulted in the identical set of ten covariates as in the earlier analysis of the propensity to purchase undeclared goods and services. Also, age and the tax morale were again used in their original form, i.e. as interval variables. Finally, the multiple imputation technique with 25 imputed values was applied to address the problem with missing data.

The results of the logit modelling, presented in Table 7, reveal a slightly different state of affairs in comparison with the descriptive insight. The most important difference is that age is not significantly associated with the likelihood of carrying out undeclared

work. A plausible reason for this outcome is that age was entered as an interval variable here, but there are also other possible explanations. For instance, it might be that other characteristics affect the propensity to work undeclared which are in turn dependent on age¹⁴. Whatever the case, it is important to state that the obtained coefficient for age has a negative sign as expected and the accompanying p-value is quite close to the threshold level.

In contrast, the findings reinforce the earlier anticipation that women are significantly less inclined to work undeclared than men. The conducted logit analysis also confirms the importance of employment status. Unemployed and self-employed individuals are far more likely to work undeclared. Yet the results on financial situation do not match those suggested by the descriptive insight. The propensity to participate in undeclared work is not conditional upon their self-assessed financial position. It is important to note that this finding does not refute the earlier theory about the twofold nature of undeclared work, as it only shows that financial situation per se does not significantly influence decisions regarding participation.

This logit model also confirms that those perceived undeclared work as widespread are more likely to do so themselves, that the perceived detection risk does not influence participation, but that the expected sanctions are significantly associated with the likelihood of participation¹⁵.

¹⁴ Tax morale is one of such characteristics (see Frey & Torgler, 2007).

¹⁵ Note that the coefficient for those who expect to be sent to prison is not significant, but the accompanying p-value is however quite close to the threshold level.

	β_i	Standard error
Female	-1.070***	0.192
Age	-0.014	0.008
Occupation (RC: Unemployed)		
Dependent employee	-0.637*	0.248
Self-employed	-0.644	0.503
Retired	-1.164**	0.361
Inactive (students, disabled, etc.)	-0.660*	0.326
Financial situation (RC: Struggling)		
Maintaining	-0.272	0.221
Just comfortable	-0.373	0.261
No money problems	0.661	0.724
Estimated share of population engaged in UW (RC: More than 50%)		
Less than 5%	-3.055**	1.107
5 to 10%	-1.647***	0.465
10 to 20%	-0.873**	0.315
20 to 50%	-0.425	0.240
Perceived detection risk (RC: Very small)		
Fairly small	-0.264	0.232
Fairly high	-0.591*	0.287
Very high	-0.163	0.327
Expected sanctions (RC: Tax + social security contributions due)		
Tax + contributions + fine	-0.456*	0.217
Prison	-1.197	0.626
Tax morale	0.193***	0.045
Type of community (RC: Rural area or village)		
Small or middle sized town	-0.427	0.222
Large town	-0.784**	0.286
Region (RC: Zagreb and surroundings)		
North Croatia	-0.139	0.329
Slavonia	0.074	0.315
Lika and Banovina	-0.719	0.485
Istria, Primorje and Gorski Kotar	0.103	0.316
Dalmatia	-0.477	0.318
Const	0.623	0.510

Number of observations	2,000
Number of imputations	25
Prob > F	0.000
Pseudo R²	0.154
Area under ROC	0.780

Table 7 Determinants of propensity to conduct undeclared work in Croatia, results of the logit model

Significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Akin to purchasing and envelope wages, tax morale was once again found to be significant. Lower tax morale is significantly associated with a higher propensity to conduct undeclared work. This therefore confirms that tax morale is an important factor.

Finally, the results on the geographical aspects of the supply side of undeclared work are different than one would assume based on the descriptive insight. The region in which one lives is not per se significantly associated with participation. Yet people from larger towns are significantly less likely to work undeclared than their counterparts from smaller towns and rural areas. These results largely confirm many previous studies on undeclared work in both South-East European and the European Union (Williams and Franic, 2016b; Williams and Horodnic, 2015a,c,d, 2016b,c; Williams and Kayaoglu, 2016; Williams et al., 2014, 2015a, 2016).

5.3 A deeper insight into the labour supply side of undeclared work in Croatia

As was the case with the purchasing undeclared goods and services, and envelope wages, suppliers were asked several supplementary questions to further develop understanding of undeclared work in Croatia. In this section we give a descriptive elaboration on these matters, alongside comparison with the findings on the same topics from the demand side, which were discussed in Chapter 3. We start with the

exact goods and services that the surveyed individuals supplied during the prior 12 months. The question was as follows:

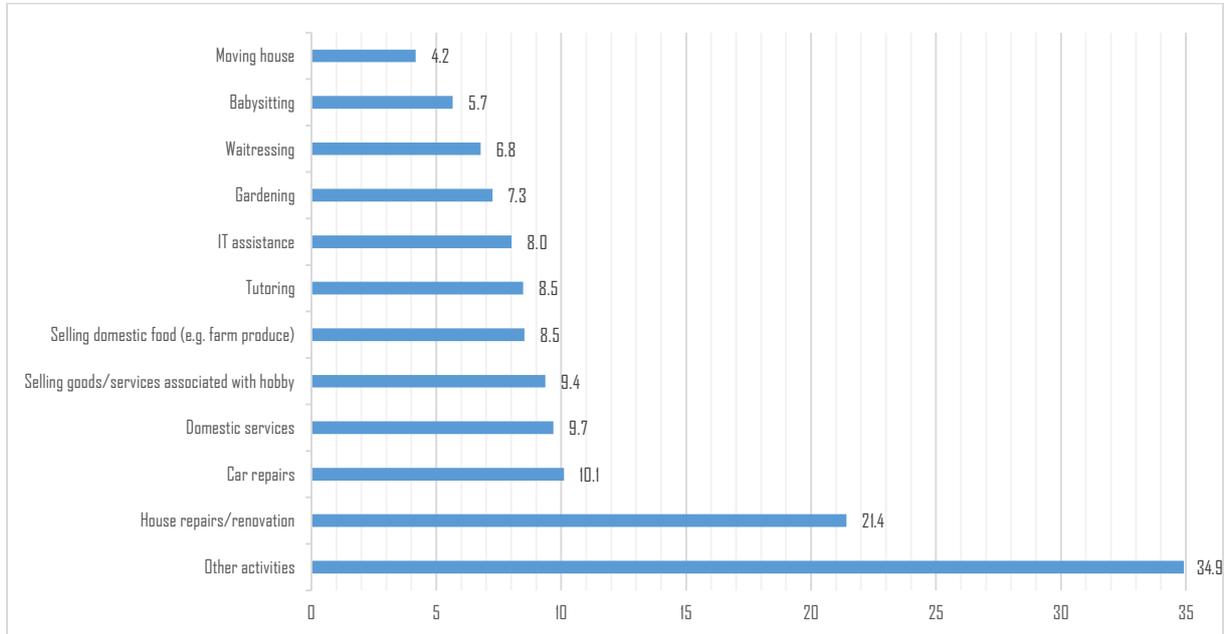
Which of the following activities have you carried out undeclared in the last 12 months?

The list of activities mostly reflected the ones given to the purchasers, but respondents were again allowed to provide answers that were not necessarily on the list. Indeed, for one third of the respondents their activity did not match any of those suggested by the interviewers, as illustrated in This is additionally confirmed by the fact that 21.4% of the surveyed undeclared workers were engaged in home repair and maintenance activities. Some 8.5% of the undeclared workers were selling their own agricultural products.

Figure 22. A closer insight into raw data revealed that the respondents most often mentioned seasonal work in agriculture and construction, as well as repairs of various electronic devices and clothes. These findings further reinforce the earlier conclusion about the pervasiveness of undeclared work in agriculture and the construction industry.

This is additionally confirmed by the fact that 21.4% of the surveyed undeclared workers were engaged in home repair and maintenance activities. Some 8.5% of the undeclared workers were selling their own agricultural products.

Figure 22 An overview of activities carried out on an undeclared basis, % of respondents admitting participation from the labour supply side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Informal car repairs were admitted by 10.1% of the workers, which is again in line with the previous findings based on demand for undeclared work in Croatia. Coincidence between the two sides of the phenomenon becomes also evident when the activities conducted in or around one's home are examined. As can be seen, such activities are not as frequent a source of undeclared work in Croatia as is the case in other EU-member states (European Commission, 2007, 2014).

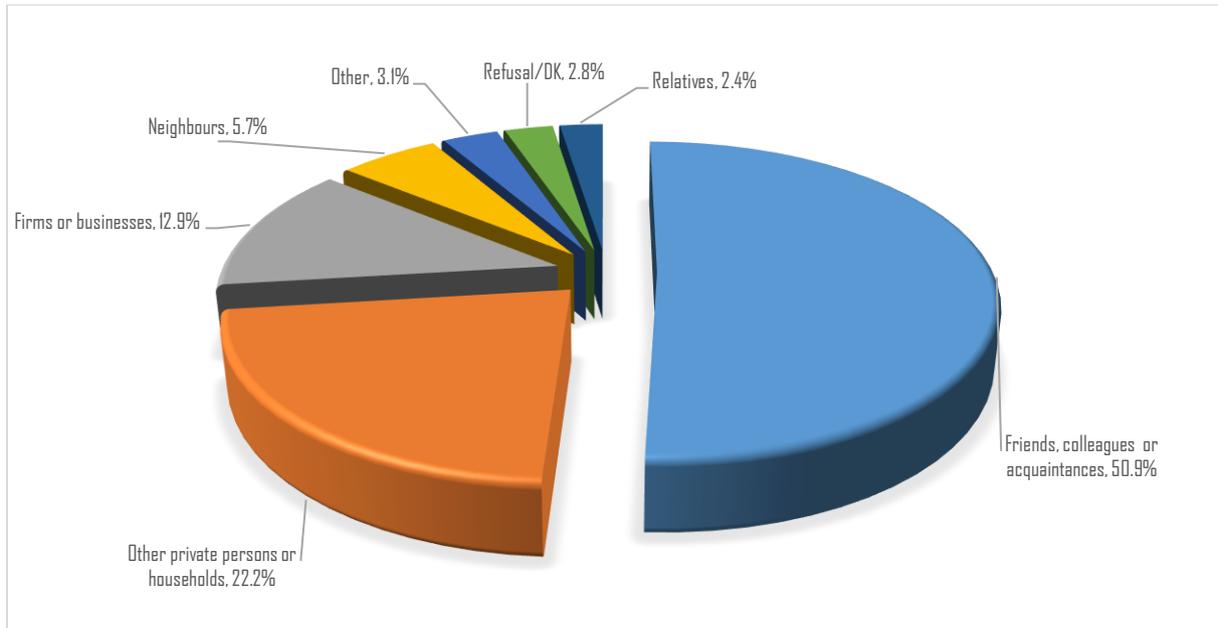
Waitressing on an undeclared basis seems not to be so prevalent an issue in Croatia. Only 6.8% of the undeclared workers admitted working as a waiter/waitress. One possible explanation can be that such jobs are more likely to be under-declared rather than fully undeclared, as suggested by the findings on envelope wage practices (see Table 5 in section 4.1).

The second question was related to the buyers of goods and services supplied by the surveyed undeclared workers. To see the type of people most frequently on the opposite side of transaction, every individual was instructed to focus on the most important activity they conducted on an undeclared basis in order to answer the following question:

Among the following, would you please indicate for whom did you carry out this activity?

The list of offered socio-economic groups completely matched that in the case of purchasers (see section 3.3), but again the respondents were allowed to give their own answer. As Figure 23 reveals, these reflect the insights from the demand side. Namely, friends, colleagues and acquaintances were identified as the final buyers in more than one half of the cases, which further reinforces the social dimension of undeclared economic practices in Croatia.

Figure 23 The structure of the buyers of undeclared goods and services in Croatia, % of respondents admitting participation from the labour supply side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Again, however, neighbours and relatives were once again detected as not particularly important stakeholders in the process. Neighbours were on the other side of the business transaction in 5.7% of the identified cases. In the same time, the good/service was supplied to relatives only in 2.4% of the undeclared trades. Private persons and households with whom the supplier has no firm social ties were identified as the second most important group in this respect (accounting for 22.2% of undeclared purchasers). This is also expected having in mind the findings on the matter from the demand side, as described in section 3.3. The same conclusion holds true regarding the role of firms and business, given that 12.9% of the surveyed undeclared workers identified companies as buyers of their goods and services.

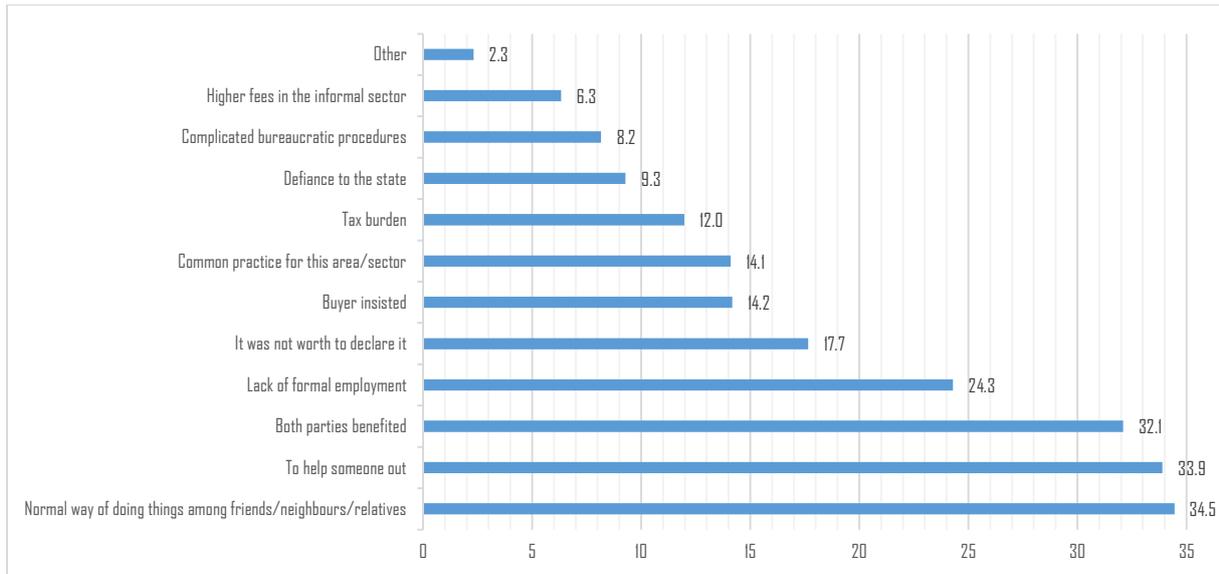
To additionally scrutinise the key factors behind undeclared work in Croatia, every undeclared worker was also asked to provide their rationales for working undeclared:

Among the following, what were the reasons for doing this activity undeclared?

Multiple answers were possible and these were not limited solely to the offered list of potential rationales. Figure 24 reveals that rationales of the suppliers do not completely match those of the buyers of undeclared goods and services in Croatia. Both social and economic rationales play an equally important role on the part of suppliers. In one third of cases, undeclared work was justified by prevalent social norms as a normal way of operating among friends/neighbours/relatives, and therefore they did not see anything wrong in such behaviour. Social aspects of undeclared work are further manifested through the fact that one in three undeclared transactions were motivated by helping people out.

Yet economic reasons also play an important role. As Figure 24 illustrates, 32.1% of the surveyed undeclared workers admitted that mutual financial benefit of both stakeholders was a reason to conceal the transaction from the authorities. In addition, every fourth individual was engaged in unregistered activities simply due to the lack of formal employment, which therefore indicates that undeclared work may have more pronounced role in making ends meet than suggested by the statistical analysis presented in the previous section.

Figure 24 An overview of the rationales for relying on undeclared work, % of respondents admitting participation from the labour supply side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

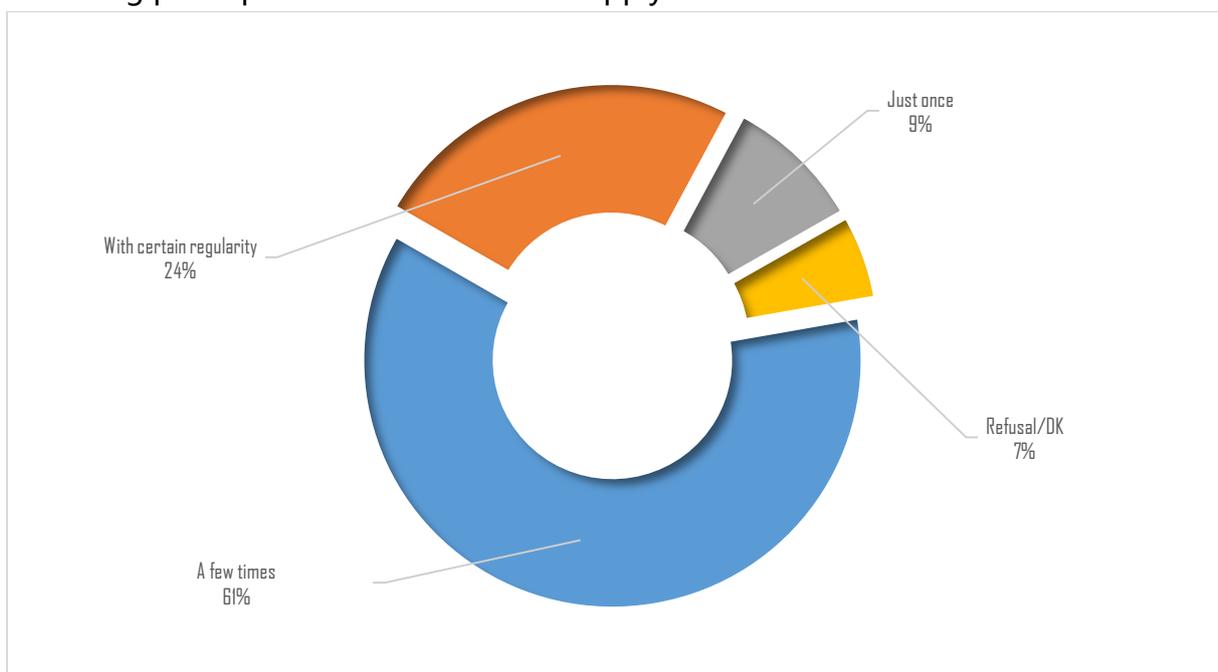
Yet, the intrusiveness of the state seems to be far less important than one would expect. For instance, only 8.2% of the respondents justified their behaviour by complicated bureaucratic procedures, and just 12% pointed at the high tax burden as the reason for failing to declare their activity. Interestingly, 9.3% of the participants argued that they see no reason for paying taxes since the state does not give anything in return.

The last two issues examined were the frequency of the undeclared activities in question and their contribution to one's overall income. With respect to the frequency, undeclared workers were asked the following question:

Thinking about the most significant undeclared work you just mentioned, did you carry out this activity only once or a few times or do you carry it out with certain regularity?

As Figure 25 reveals, such activities are most often done with some recurrence. Six out of ten undeclared workers reported that the activity in question was being conducted a few times during the year. In one quarter of identified cases the task was being repeated with certain regularity, while only 8.9% of the research participants stated that the particular activity took place just once.

Figure 25 Frequency of the most important undeclared activity, % of respondents admitting participation from the labour supply side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

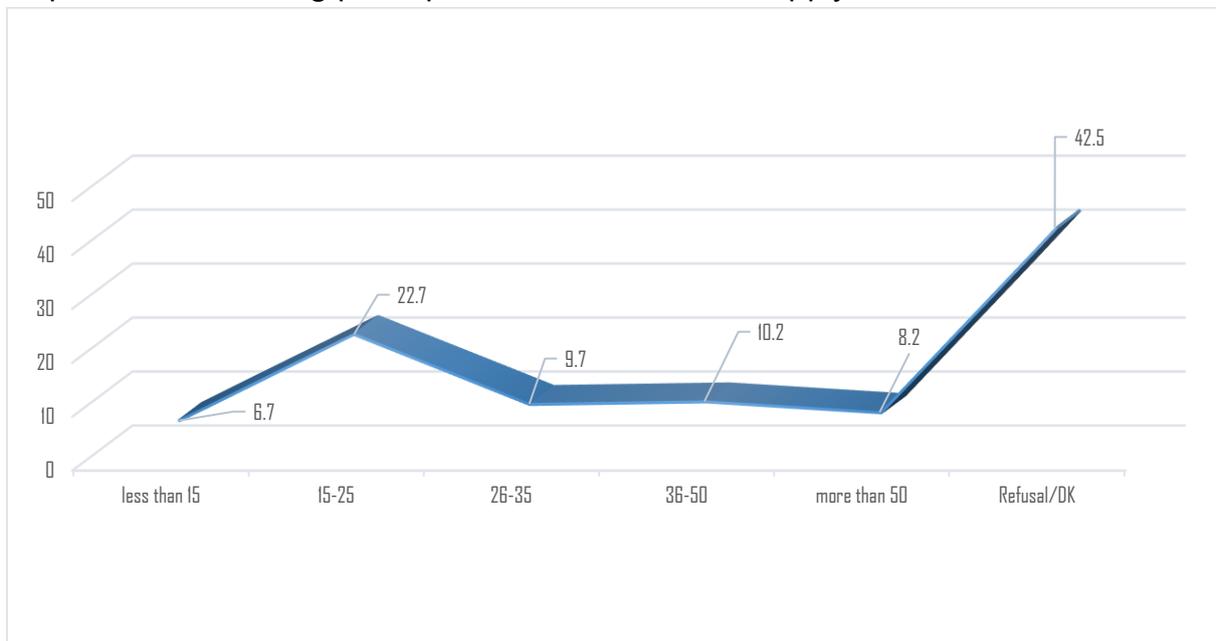
Since in most cases the activity was done on an occasional basis, the issue of income had to be approached with caution. To get comparable findings, the respondents were therefore asked about income per hour from this activity (in national currency):

1APPROXIMATELY, how much did you get per hour on average for this activity?

Most people were not willing to share this information with the interviewer, which therefore resulted in 42.5% of faulty answers (see Figure 26). Yet, since a considerable proportion of undeclared workers eventually gave the answer, this question fulfilled its purpose as it provided at least some information on undeclared earnings. Before starting, it is important to stress that the average net earnings per hour in Croatia was HRK 32.98 for the period January-October 2015 (Croatian Bureau of Statistics, 2015).

As Figure 26 shows, at least 30% of the undeclared workforce in Croatia is significantly under-paid in comparison to the individuals working inside the formal realm. Some 6.7% of the respondents received less than HRK 15 per hour, while a further 22.7% were earning between HRK 15 and HRK 25 per hour.

Figure 26 Price per hour (in HRK) for the most important undeclared activity, % of respondents admitting participation from the labour supply side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Yet, there is also a non-negligible group of undeclared workers earning above the national average. For instance, one in ten interviewed undeclared workers said that

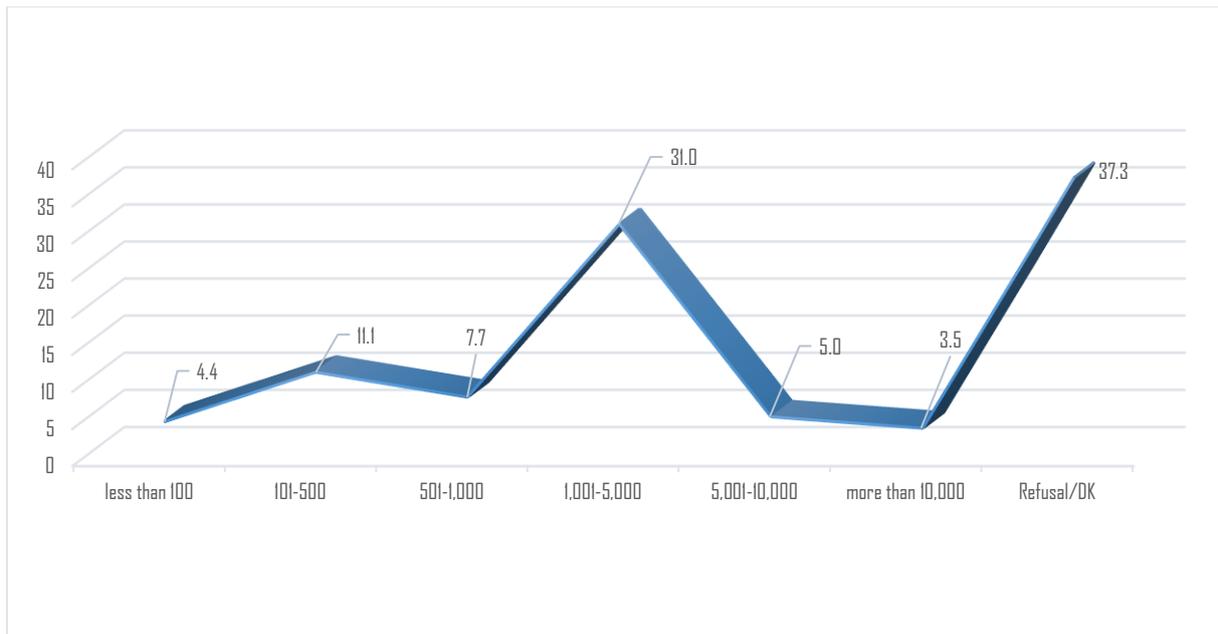
their income from this particular activity ranged between HRK 36 and HRK 50, while for a slightly lower proportion (8.2%) their per hour income was above HRK 50. These findings again reinforce the earlier notion that there is an upper and lower tier of undeclared workers in Croatia.

The last issue to be examined is the total income from undeclared work. Undeclared workers were asked to think about all undeclared activities conducted in that period, so as to answer the following question:

APPROXIMATELY, how much did you get in total from these undeclared activities in the last 12 months?

Once again, the respondents were not particularly willing to provide the exact answer, which resulted in 37.3% of them either refusing to answer or arguing they do not know the state of affairs in this respect (see Figure 27). Taking this group aside, we can see that approximately one third of the participants admitted to having earned between 1,000-5,000 HRK from undeclared work during the previous 12 months.

Figure 27 Total net income from undeclared work in the last 12 months, % of respondents admitting participation from the labour supply side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

On the other hand, more than one in five undeclared workers stated that their total net income from undeclared work was below HRK 1,000, which implies that such activities were done on an occasional basis and not a particularly important source of income for these individuals. However, some 3.5% of undeclared workers earned more than HRK 10,000.

Supply side of undeclared work in Croatia – key facts

- ✓ 9.2% of Croatians carry out unregistered economic activities, with men more likely to work undeclared than women.
- ✓ Undeclared work is most common among unemployed and self-employed individuals.
- ✓ Tax evasion in Croatia is to a great extent a combination of cultural and economic factors.
- ✓ There is evidence of a high social embeddedness of undeclared work in Croatia.
- ✓ Friends, colleagues and

6 Personal connections and their role in solving everyday problems in Croatia

Compared with undeclared work and under-declared work, relatively little attention has been given in previous studies to the use of personal connections to get things. This chapter summarises the most important findings. The first section elaborates the demand side of this practice, with particular emphasis on the incidence and pervasiveness of such behaviour in 13 different spheres of life. This is followed by an overview of the supply side in section 6.2. The last section discusses the results of the logit modelling, which was applied so as to understand demographic and socio-economic determinants of this phenomenon in Croatia.

6.1 Pulling strings to have things done – an overview of the situation in Croatia

To understand the use of personal connections to get things done, 13 situations were focused upon in which the illicit circumvention of rules and norms most commonly happens, according to the research studies on this phenomenon around the world (see Onoshchenko & Williams, 2013). Each was separately discussed with the respondents in order to see if they have relied on personal connections in any of them, why they decided to bypass standard procedures in such situations, as well as to understand who provided the favour and how they compensated the person who helped them.

To gain insight into the pulling string practice, the following question was posed:

Have you in the last twelve months asked anyone for a favour/help using connections in any of the following spheres?

The following situations were discussed: medical services (skipping queue, getting better examination, surgery); solving problems with the law enforcement authorities (traffic police, customs); finding a job; education (places in higher education/obtaining degree/diploma, etc.); legal services and courts; everyday services at better quality or better price (bank services, hairdressers, etc.); repairs (housing, garages, car); tickets for events (theatre, concerts); hobbies and entertainment (resorts, travelling tickets); consumer goods (excluding foodstuffs); communicating with local authorities in one's business matters (e.g. delaying tax payment); foodstuffs; and speeding up bureaucratic procedures (e.g. at the municipal hall). It should be also mentioned that every respondent was also allowed to add any other situations in which they achieved advantage in such a manner, but which were not on the list.

In total, 30.8% of the participants admitted to having asked someone a favour in at least one of these spheres. Table 8 shows that Croatians most often circumvent procedures related to medical services, with 17% of participants admitting to have used personal connections in order to skip the queue, get better medical examinations or shorten the waiting time for surgery at least once during the prior 12-month period.

Yes	No	Refusal/D K
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Medical services: skipping queue, getting better examination, surgery	17.0	81.4	1.6
Solving problems with the law enforcing authorities: traffic police, customs	4.0	94.7	1.3
Finding a job	9.1	89.1	1.8
Education: places in higher education/ obtaining degree/diploma etc.	1.9	96.7	1.4
Legal services and courts	2.8	95.7	1.5
Everyday services at better quality or better price (bank services, hairdressers...)	6.2	92.3	1.5
Repairs (housing, garages, car)	12.0	86.7	1.3
Tickets for events, theatre, concerts	4.3	94.4	1.3
Hobbies and entertainment, resorts, travelling tickets	3.6	95.1	1.3
Consumer goods excl. foodstuffs	3.5	95.2	1.3
Communicating with local authorities in your business matters (e.g. delaying tax payment)	2.7	96.0	1.3
Foodstuffs	4.5	94.2	1.3
Speeding up bureaucratic procedures (e.g. at the municipal hall)	4.3	94.4	1.3
Other	0.5	97.6	1.9

Table 8 Pulling strings in various spheres of public life in Croatia, % of surveyed individuals

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

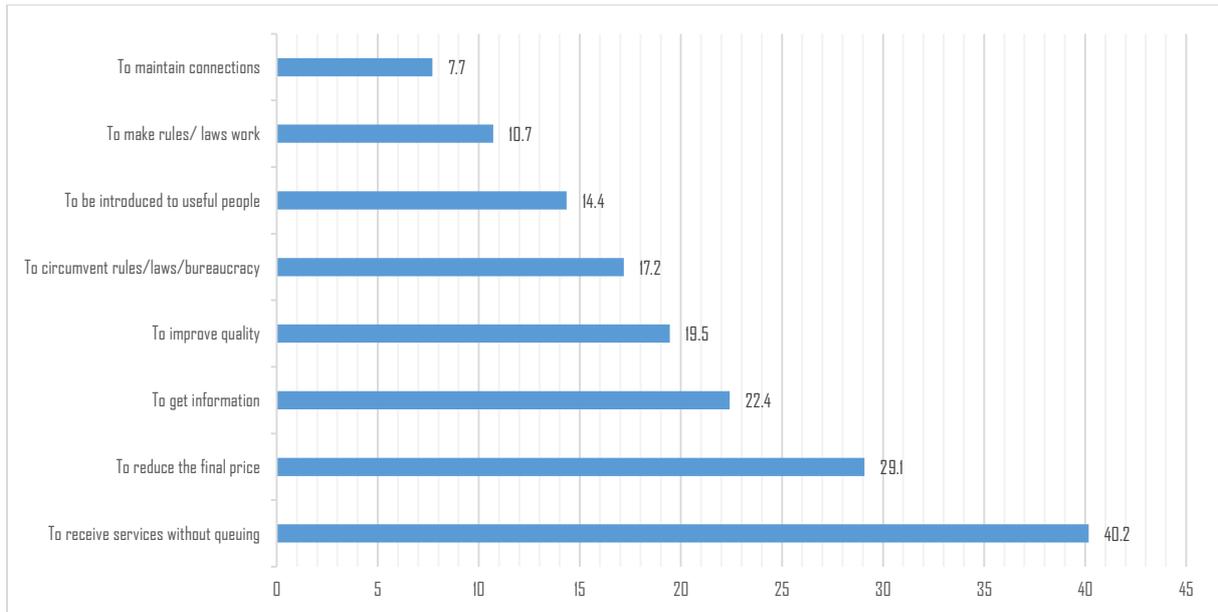
The second most frequent situation in which Croatians used pulling strings to get things was for various repairs. This is not surprising having in mind that exactly this area of activity was also recognised as being highly prone to undeclared work. Some 12% of Croatians use informal methods even to search for people that would conduct repair services for their houses/apartments, cars and/or electronic advices.

The results presented in Table 8 further reveal that a non-negligible part of population circumvents rules when searching for employment for themselves or members of their family. Some 9.1% of the surveyed individuals admitted to have asked people to assist them in getting a job. This is followed by reliance on personal connections to get everyday services at better quality or better price, reported by 6.2% of the respondents. All other spheres seem not to be particularly prone to this type of misconduct. For instance, only 4% of citizens solve problems with the law

enforcement authorities in this way, while only 2.8% of them apply this method to circumvent procedures related to legal services and courts. Yet, this does not mean that these fields are not prone to dishonest behaviour, as the practice of pulling strings is just one type of illegitimate conduct related to public affairs. Other related practices, such as corruption, however, were not evaluated by the survey.

For each situation for which they admitted to circumventing the rules, the respondents were asked to identify the reason for such behaviour. Figure 28 presents the findings, illustrating the proportion of people mentioning each rationale at least once (i.e. for at least one of the offered domains). The findings reveal that dissatisfaction with the time they have to wait to get a product or service is by far the most frequent reason for Croatians to pull strings. Four out of ten respondents mentioned this for at least one of the spheres of public life in which they relied on help from people. This is followed by endeavours to reduce the final price, which was identified by 29.1% of the survey participants as the key motivation to disobey rules and norms.

Figure 28 Most frequent reasons to use personal connections in Croatia, % of individuals who admitted pulling strings



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

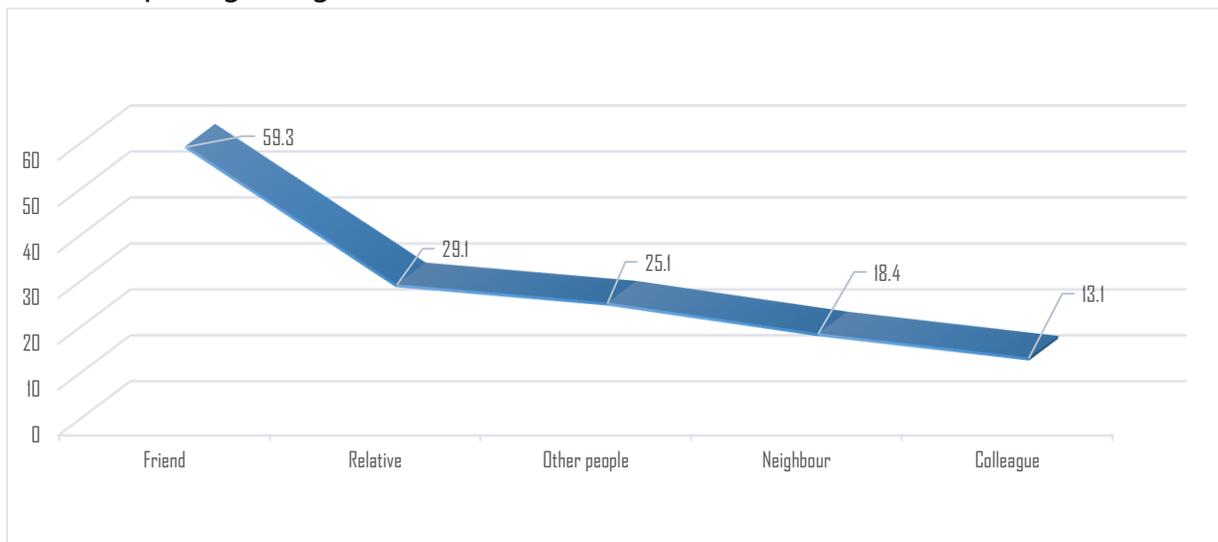
The lack of information was the main reason to ask a favour for 22.4% of the identified violators, while 19.5% of them did so in order to improve quality of the good or service in question. Interestingly, one in ten people complained that at least once they were forced to pull strings simply because the existing rules and laws were not enforced in practice. In other words, those people argued that otherwise they would not have got the service they were entitled to. Finally, there is also a non-negligible proportion of individuals using this practice simply to maintain social contact with people (7.7%), which therefore indicates a considerable level of embeddedness of this practice in Croatian culture.

To further understand pulling strings, for each of the areas in which they admitted reliance of personal connections, the respondents were also asked the following question:

Who was the person who helped you/did you a favour?

The list of potential providers of the favour was offered to every participant, but possible responses were not limited solely to this list. As Figure 29 reveals, friends are most frequently asked for favours. Almost six out of ten survey participants asking for a favour to have things done did so from their friends.

Figure 29 The overview of people who helped/did a favour, % of individuals who admitted pulling strings



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

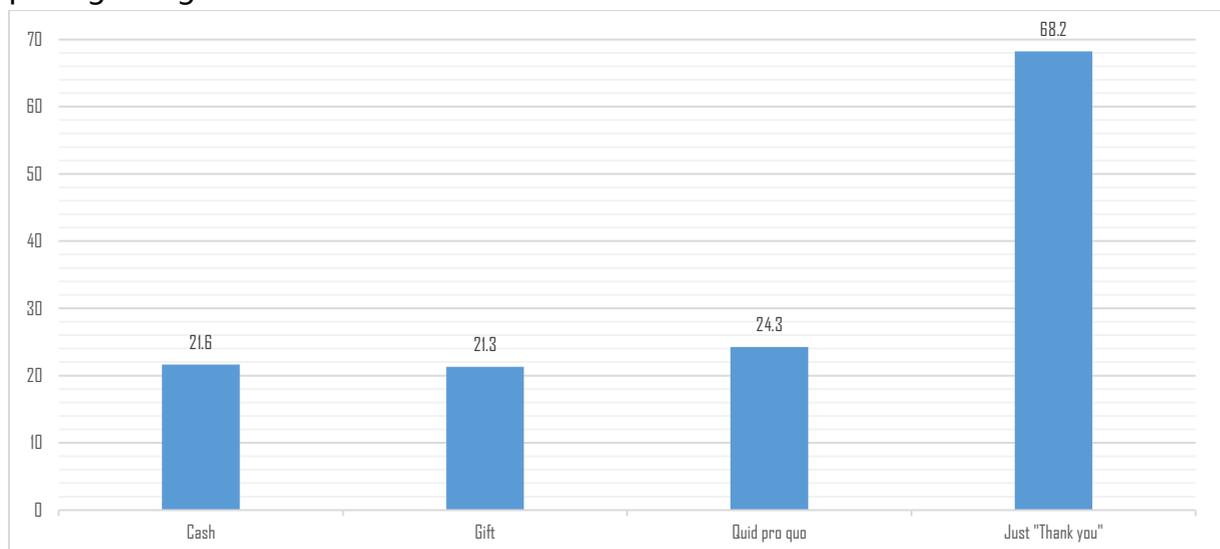
The second most important source of help was relatives, cited by 30% of the respondents circumventing rules and procedures. Neighbours provided assistance to 18.4%, while colleagues did so for 13.1%. Every fourth person asking for a favour had at least one experience in which they did not use a close social tie (e.g., friends of friends, acquaintances).

For each identified case of the use of personal connections, the respondents were asked the following question:

How did you reward/compensate your connection for the favour/help received?

In this case, a definite list of four possible outcomes was given. The potential compensations included: gift; cash; a favour for a favour (quid pro quo); and verbal gratitude only (i.e. just 'thank you'). Figure 30 reports the results. Over two-thirds (68.2%) of instances involved merely verbal gratitude expressed to the provider of the favour/help. In 24.3% of situations a favour was offered in return. Yet, although they are not as often as one would expect, transactions including material gain for the accomplice are far from being exceptions in Croatia. One in five people relying on assistance to circumvent rules/laws/procedures repaid their gratitude with a gift and one if five gave money to the provider.

Figure 30 The overview of given compensations, % of individuals who admitted pulling strings



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

6.2 Frequency and distribution of personal connections from the supply side

To examine this from the supply side, respondents were asked whether they did a favour to/helped someone in any of the 13 areas introduced before. Those who admitted such a conduct were then asked why they did so, who was the person they helped and how they were compensated for this. This sections reports the most important findings. Since the questions asked in this part of the survey were essentially identical to the ones related to the demand (up to semantic alterations regarding the subject and object), we skip them here. Instead, only the summarised results are presented and discussed, following the same approach as in section 6.1.

In total, 20.2% of the survey respondents admitted to helping someone in at least one of the offered areas. On the whole, the results on incidences of providing help/doing favours to circumvent rules and norms in various spheres, which are summarised in Table 9, to a great extent confirm the state of affairs revealed in the previous section. This particular type of misbehaviour in Croatia is very much related to medical services and the search for a job, as well as when one wants to get in touch with a reliable mechanic and/or handyperson.

Taking advantage of their own position to help other people find a job was admitted by 14.1% of the participants, thus being the most frequent area in which Croatians do favours for others. Assistance in finding a mechanic and/or handyperson during the

12-month period before the survey was reported by 13.5% of citizens, while 10.5% of them helped someone to skip a queue or to get better treatment in hospitals.

	Yes	No	Refusal/D K
Medical services: skipping queue, getting better examination, surgery	10.5	88.5	1.0
Solving problems with the law enforcing authorities: traffic police, customs	4.3	94.7	1.0
Finding a job	14.1	85.1	0.8
Education: places in higher education/ obtaining degree/diploma etc.	3.8	95.2	1.0
Legal services and courts	3.2	95.8	1.0
Everyday services at better quality or better price (bank services, hairdressers...)	7.1	91.9	1.0
Repairs (housing, garages, car)	13.5	85.7	0.8
Tickets for events, theatre, concerts	5.4	93.6	1.0
Hobbies and entertainment, resorts, travelling tickets	5.7	93.3	1.0
Consumer goods excl. foodstuffs	4.9	94.1	1.0
Communicating with local authorities in your business matters (e.g. delaying tax payment)	2.9	96.3	0.8
Foodstuffs	6.1	92.8	1.1
Speeding up bureaucratic procedures (e.g. at the municipal hall)	4.8	94.0	1.2
Other	0.7	97.2	2.1

Table 9 Doing favours in various spheres of public life in Croatia, % of surveyed individuals

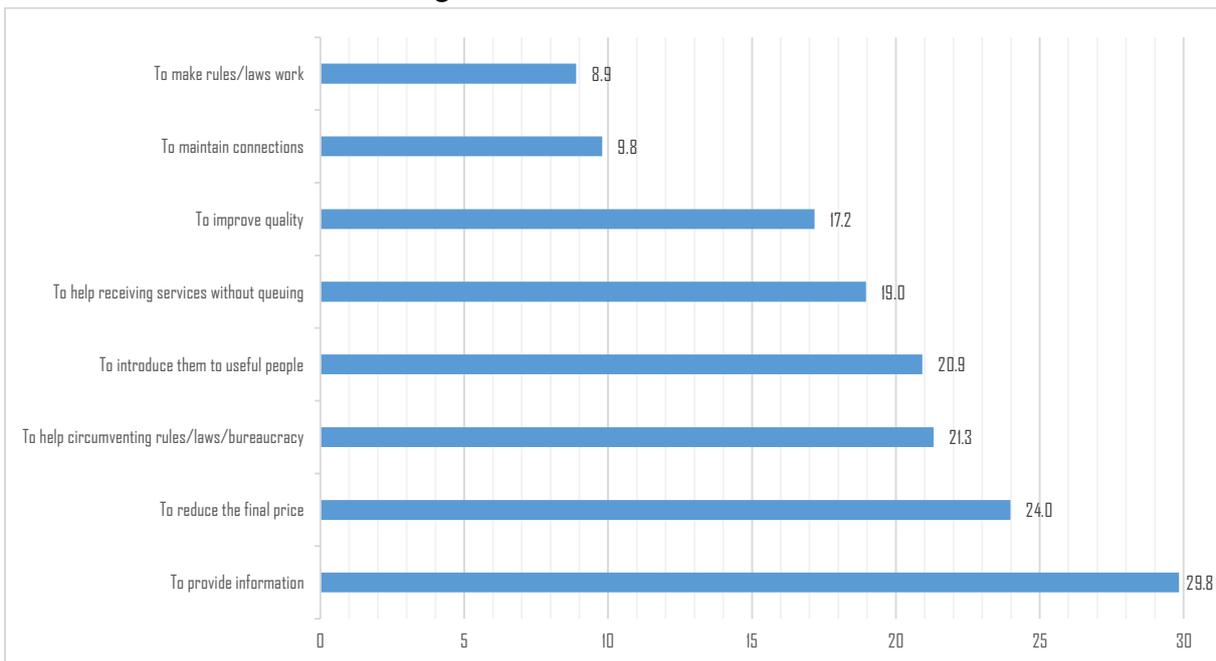
Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Besides these, Croatians also frequently assist other people to get services at better quality or a better price, which was the situation reported by 7.1% of the survey participants. When it comes to other spheres of life, we can emphasise the acquisition of foodstuffs (6.1%), as well as the purchase of tickets (5.4%) and administration of events related to entertainment (5.7%) as activities in which Croatians also regularly provide their help.

Turning to the main reasons for helping other people, the results are somewhat different than in the case of the demand for favours. Figure 31 reveals that providing

essential information was the most frequently identified motivation on the part of the suppliers. Almost 30% of the individuals who admitted doing favours justified their behaviour this way for at least one of the occasions in which they provided assistance. Reduction of the final price was the second most frequent motivation (cited by 24%).

Figure 31 Most frequent reasons to provide help/assistance in Croatia, % of individuals who admitted doing favours

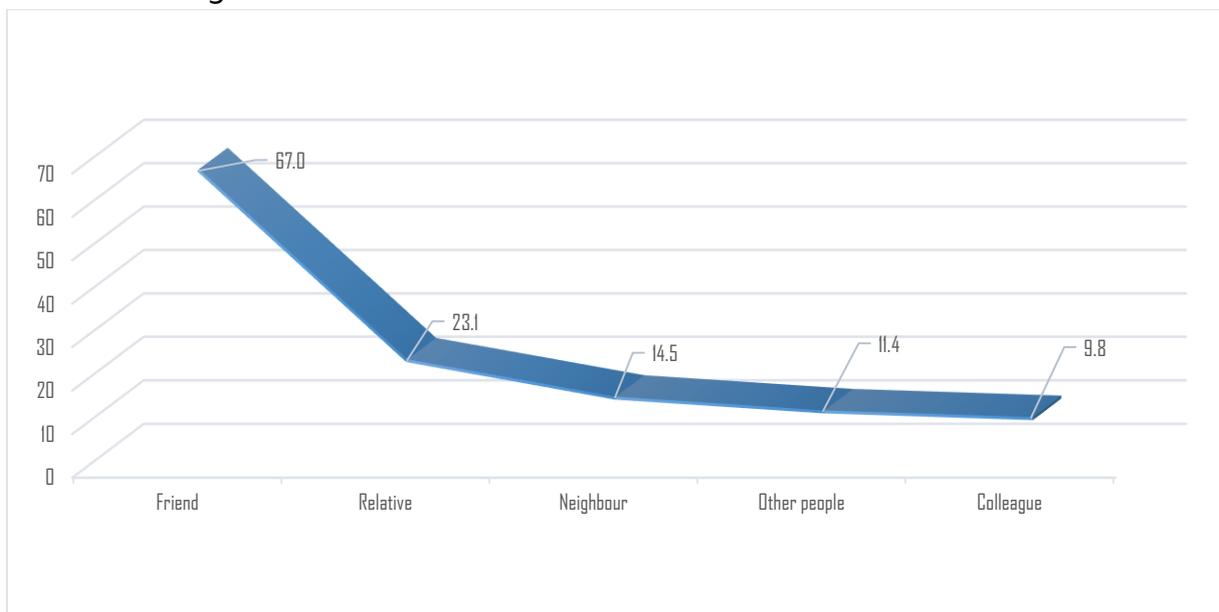


Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Other common rationales include circumvention of rules/laws/bureaucracy, which was mentioned by 21.3%, as well as introduction of their friends/relatives/colleagues to useful people (20.9%). It is also important to note that every tenth individual providing assistance to other people did it simply to maintain connection, which confirms the earlier impression of high embeddedness of this practice in Croatian culture.

When it comes to who they helped, the findings in Figure 32 completely mirror the situation encountered when this practice was examined from the demand-side. Two out of three identified providers did a favour for a friend and as before, relatives are the second most frequent group who are helped by almost every fourth encountered provider of illegitimate assistance.

Figure 32 The overview of people who received a favour, % of individuals who admitted doing favours



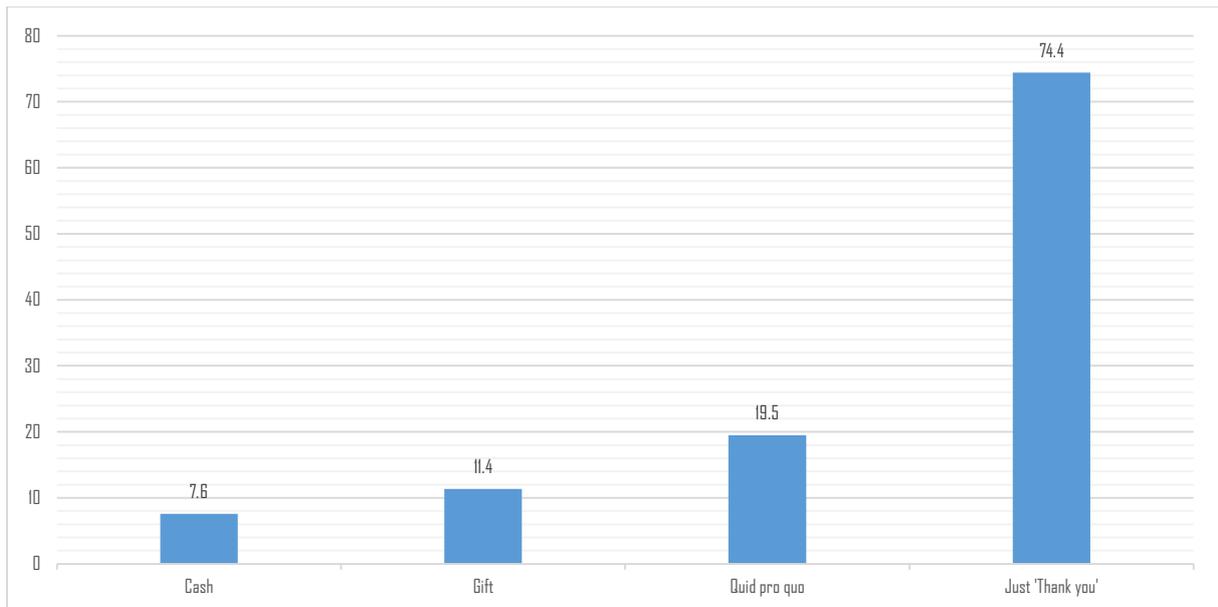
Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

On the other hand, the remaining three groups were not recognised as particularly frequent recipients of favours; 14.5% had helped a neighbour at least once, 9.8% did for a colleague, while 11.4% had no firm social tie with the provider.

The results on the received compensation, presented in

Figure 33, again reflect the demand-side. Three-quarters of providers of assistance asserted that the person they helped simply expressed verbal gratitude, without giving any material compensation. A further 19.8% either expected the favour to be returned in future or some particular help was given in return for an earlier favour. However, material rewards for given favours do exist. Such instances mostly comprise gifts, while cash payments are much less common, with 7.6% of individuals who did a favour for somebody during the prior 12 months receiving money, while 11.4% were rewarded with a gift.

Figure 33 The overview of received compensations, % of individuals who admitted doing favours



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

6.3 Factors explaining propensity to rely on personal connections in Croatia

In order to get an insight into demographic and socio-economic drivers of pulling string practices in Croatia, we once again apply logit analyses. This is done by modelling only the propensity of Croatians to engage in such behaviour, thus leaving aside likely differences between numerous spheres in which one can rely on personal connections. To be precise, for the purpose of the analyses conducted in this section we only distinguish two groups of citizens: individuals who completely denied participation in pulling strings (for all offered spheres) and those who admitted this (for one or more of the spheres).

Therefore, the dependent variable for the demand-side is a binary indicator denoting whether (or not) the individual asked for any type of favour during the 12-month period preceding the survey. Likewise, the second dependent variable indicates

whether (or not) the individual helped anybody to circumvent rules and regulations, regardless of the circumstances in which this occurred. Besides scrutinising the effect of individuals' personal characteristics in this respect, the intention was also to see if there is any link between undeclared work and pulling string practices in Croatia. For that reason, indicators of participation in undeclared work (i.e. demand and supply side of the phenomenon) were included as explanatory variables in the accompanying logit models. Recall that both these variables were used as dependent variables in the statistical analyses presented earlier in this report (see section 3.2 and section 5.2).

The inclusion of these two covariates restricted the list of potential other explanatory variables owing to collinearity issues. While some of the variables used in chapters 3 and 5 had to be completely omitted for this reason, some others were replaced with instrumental variables. To be exact, employment status was excluded this time due to substantial association with participation in undeclared work (see section 5.2). On the other hand, self-assessed financial position was replaced by the indicator of net income from formal work. Since these two variables give quite comparable information, the decision was made to include the latter to mitigate problems with multicollinearity.

What is more, some variables used earlier in this report were not suitable in this case given the differences between the two types of behaviour in question (i.e. undeclared work and pulling strings). For instance, there is no theoretical reason to expect that one's decision to rely on personal connections will depend on tax morale, perception regarding the share of population engaged in undeclared work, perceived detection risk nor expected sanction if caught in undeclared work. Therefore, these four variables were also excluded from the analyses.

However, this enabled inclusion of one variable that was previously omitted owing to multicollinearity issues, but which might play an important role, namely household size, following the rational assumption that the larger number of people one needs to take care of (e.g. children and elderly) implies a higher need for reliance on connections.

Finally, demographic and geographic aspects of pulling string practices were evaluated using the same four variables as before. Therefore, the following explanatory variables were included in the analyses: age; gender; region; type of community; household size; net income from formal employment; indicator of participation in undeclared work from the demand size; and indicator of supply of undeclared goods and services. As before, a multiple imputation technique was applied to address the issue of missing values.

The results presented in Table 10 reveal a significant association between undeclared work and pulling string practices in Croatia. Individuals buying goods and services on an undeclared basis are statistically more likely to ask someone for a favour, as well to do favours than those who do not use informal means of payment when acquiring goods and services. Those participating in undeclared work are also more likely to ask for, as well as to provide, a favour than individuals who do not work undeclared. However, it must be stressed that purchasers of undeclared goods and services have a stronger inclination to participate in pulling string practices than those who work on an undeclared basis. This can easily be seen by comparing the magnitude of the accompanying coefficients in Table 10.

There are also other factors significantly associated with pulling strings to circumvent processes and procedures. The statistical analyses reveals no difference between genders, suggesting that women do not differ from men when it comes to asking for and doing favours. Yet, differences do exist between age groups. The logit analyses show that younger individuals are far more likely to both provide help and ask for help than older members of society. As expected, the size of one's household is also a significant determinant, but only on the likelihood of asking for a favour, while it has no impact on propensity to help someone.

Turning to the effect of net income, the results indicate that the practice of pulling strings is most common among the middle income groups. Namely, individuals earning between HRK 5,001 and HRK 10,000 are statistically most likely to rely on connections, while there is no significant difference between the remaining income groups. Likewise, doing favours was found to be much less inherent among the poorest and the richest individuals than among the mid-income earners.

There are also significant spatial variations. Individuals from the capital, as well as those from Istria, Primorje and Gorski Kotar are statistically more likely to rely on personal connections than their counterparts from other regions of Croatia. However, there was no significant difference between urban and rural areas. The only significant coefficient in this respect is the one indicating a lower propensity of individuals living in large towns to do favours in comparison with the rest of population. However, the accompanying p-value in this case is just slightly above the threshold.

Given that age and the tendency to purchase undeclared goods and services are important predictors with respect to both sides of pulling string practices, we can

evaluate how the probability to participate in this realm differs among the 'representative' Croatian citizen with respect to their age and whether they purchase undeclared goods and services. For the purpose of this particular analysis, the representative citizen is defined using mean and modal values of the remaining six explanatory variables across the surveyed individuals. That is to say, the representative citizen is a woman from the capital who does not work on an undeclared basis, earns between HRK 2,500 and HRK 5,000 and shares her household with two persons.

Table 10 Determinants of propensity to be engaged in pulling string activities in Croatia, results of the logit model

	Pulling strings to have things done	Doing favours
Female	0.132 (0.115)	-0.117 (0.144)
Age	-0.010** (0.004)	-0.014*** (0.004)
Household size (RC: one person)		
Two persons	0.411* (0.168)	0.027 (0.222)
Three persons	0.387* (0.188)	0.119 (0.234)
Four or more people	0.566** (0.178)	0.018 (0.227)
Net income (RC: less than HRK 2,500)		
HRK 2,500-5,000	0.236 (0.135)	0.572*** (0.171)
HRK 5,001-10,000	0.389* (0.179)	0.488* (0.238)
More than HRK 10,000	0.240 (0.474)	0.741 (0.604)
Working on an undeclared basis	0.461* (0.196)	0.653** (0.226)
Purchasing undeclared goods and services	1.457*** (0.123)	1.293*** (0.151)
Type of community (RC: rural area or village)		
Small or middle sized town	0.040 (0.130)	-0.088 (0.162)
Large town	-0.261 (0.163)	-0.431* (0.203)
Region (RC: Zagreb and surroundings)		
North Croatia	-0.734*** (0.193)	-0.751** (0.248)
Slavonia	-0.862*** (0.195)	-1.001*** (0.269)

Lika and Banovina	-0.504* (0.241)	-0.482 (0.308)
Istria, Primorje and Gorski Kotar	-0.312 (0.198)	-0.285 (0.238)
Dalmatia	-0.795*** (0.175)	-0.541* (0.212)
Const	-0.904** (0.300)	-1.325*** (0.377)
Number of observations	2,000	2,000
Number of imputations	30	30
Prob > F	0.000	0.000
Pseudo R²	0.110	0.112
Area under ROC	0.714	0.731

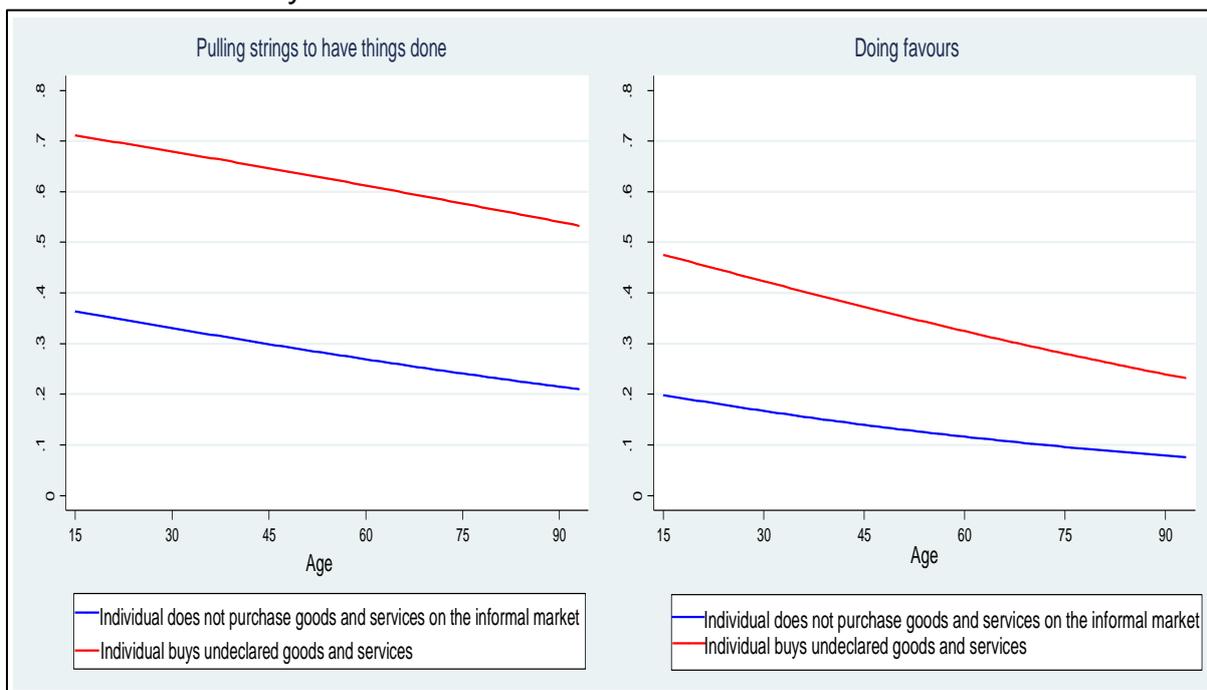
Note: Standard errors are given in parentheses

Significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

The results graphically portrayed in Figure 34 indicate that the behaviour of representative Croatian citizens highly differ depending on their age and (non)involvement in the purchase of undeclared goods and services. For instance, while approximately 35% of 20-year-old individuals who do not buy products undeclared are expected to rely on people pulling strings for them, this rises to 70% for citizens who share all the same characteristics, except that they purchase goods and services undeclared.

Figure 34 Probability to be engaged in pulling string activities in Croatia for a 'representative' Croatian citizen depending on their age and participation in the undeclared economy from the demand side



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

Yet, the propensity to solve problems by relying on help from friends and relatives constantly declines with age, as illustrated in Figure 34. To exemplify this, we can evaluate behaviour of three women from the capital, where all earn between HRK 2,500 and HRK 5,000, do not participate in the undeclared realm and share their

household with two persons. The only difference is that the first one is 20 years old, the second one is 45 and the third one is aged 65. According to the presented analysis, the first woman has a 35% chance of using personal connections, while for the second one it is 25% and for the third one it is 15% respectively. The state

Pulling strings to get things done in Croatia – key facts

- ✓ 30.8% of the survey participants admitted asking for a favour to circumvent official channels, while 20.2% provided assistance.
- ✓ Reliance on personal connections most commonly related to medical services, as well as when searching for a job and handyperson.
- ✓ Skipping queues, reducing the final price of services and the lack of essential information are the most common reasons in Croatia to engage in this practice.
- ✓ In most cases, the favour is done for/asked from a friend.
- ✓ This practice rarely entails financial remuneration.
- ✓ Most commonly, only verbal gratitude is expressed from the recipient of the favour.
- ✓ Younger individuals are more prone to rely on this strategy of circumventing norms and rules.
- ✓ There is a significant association between undeclared practices and reliance on personal connections in Croatia.

7 Tackling illegitimate economic activities – overview of taxpayer's opinion

The last issue evaluated is the perception of Croatian citizens regarding the most efficient means of fighting illegitimate activities. Equal attention is paid to the demand and supply side of undeclared work, as well as to envelope wages and pulling string practices. This chapter briefly summarises the most important findings. The first section focuses upon undeclared and under-declared work, while the second section presents the views of Croatians on appropriate strategies to reduce reliance on personal connections.

7.1 Citizens' attitudes towards various strategies for tackling undeclared work

The inquiry about the most effective approach to combat undeclared work was developed in line with the existing literature on the prevalent policy strategies in the EU in this respect (Eurofound, 2008, 2013; Williams, 2014, 2015c; Williams and Nadin 2012a,b; Williams et al., 2013a). Namely, the increasing number of studies on this matter has revealed existence of four different approaches, based on the exact goal of the applied measures and targeted population (Dekker et al., 2010; Sepulveda & Syrett, 2007; Williams et al., 2013a).

The most straightforward strategy is eradication, which is based on the increased endeavours of the authorities to detect and punish noncompliance (Allingham & Sandmo, 1972; Williams & Nadin, 2012a). When it comes to indirect methods for the reduction of undeclared work, the most common among them are the so-called 'preventative measures' (Dekker et al., 2010; Eurofound, 2013). Such measures seek to intercept noncompliance before it occurs, either by providing incentives to start

activities inside the formal economy for new entrants or by limiting the potentials for illegitimate behaviour.

There is also a group of 'curative measures', namely those encouraging individuals and firms already working on an undeclared basis to formalise their activities (Eurofound, 2008; Williams et al., 2013). Finally, 'commitment measures' include awareness raising and education campaigns that seek to increase tax morale of citizens and consequently foster voluntary compliance (Eurofound, 2008, 2013).

To see what citizens in Croatia think in this respect, a set of the most common individual measures from each of these four policy approaches was chosen¹⁶. Survey respondents were then given a set of statements, where each statement links one particular policy measure with its potential effect. The participants were asked to express their level of agreement with those statements on a Likert scale, with values ranging from '1' (strongly disagree) to '5' (strongly agree). The exact question was structured as follows:

Now I would like to know your level of agreement with the following statements. For each of them please tell me to what extent you agree or disagree with the statement: '1' means "strongly disagree" and '5' means "strongly agree" .

The odd number of categories within the scale was given on purpose to allow neutral attitudes (i.e. answer '3'). In addition, the ordering of statements was randomised

¹⁶ Eleven measures were evaluated in total. The exact explanation for the choice of policy measures is beyond the scope of this report, but a curious reader is advised to consult Williams (2014).

so as to avoid suggestions with respect to the importance of measures. Table 11 reports the findings. To ease comprehension of the results, the most frequent answer on each statement is highlighted in red.

On the whole, the survey respondents widely agreed with the majority of statements, therefore supporting a mixture of diverse policy strategies (see Table 11). The only exception is the issue of increased penalties; this idea seems to be mainly opposed by Croatians. Only 19% of the surveyed individuals strongly agreed that increasing penalties up to imprisonment would be an effective way of tackling undeclared and under-declared work, while almost 30% strongly disagreed with this statement. On the other hand, citizens generally advocate more inspections on the employers' premises. More than 60% of the surveyed individuals argued that increased repression towards employers would have a positive effect in this respect. At the same time, only 7.8% of the participants did not agree that this would be a correct way forward.

The findings also reveal that certain changes in the work of the Tax Administration might result in increased compliance, at least in the opinion of the citizens. This primarily relates to a less harsh approach towards tax evasion by mistake, as 38% of the surveyed participants strongly believed that a significant improvement in this respect can be achieved.

		1 strongly disagree	2	3	4	5 strongly agree	Refusal	Do not know
1	If people were better informed on how government is spending public money, they would be more willing to pay taxes.	18.4	11.5	21.9	17.8	27.6	1.1	1.7
2	Ensuring a sense of fairness in how people are treated by the tax authorities would reduce evasion of taxes and social contributions.	7.5	9.5	21.3	26.5	33.2	0.8	1.2
3	If people had greater trust in government, they would be more willing to pay their taxes.	10.9	9.7	20.8	21.5	34.5	1.1	1.5
4	Telling consumers about the negative consequences of undeclared work (e.g., no insurance cover, no guarantees that health and safety regulations have been followed, no legal recourse) would reduce where they use it.	11.9	14.2	25.9	23.5	21.6	1.0	1.9
5	Specialised support and advice for those who are considering moving from undeclared to formal work would reduce undeclared work.	11.2	12.8	24.5	23.7	24.3	1.1	2.4
6	Tax evasion would be reduced if the tax authorities make it easier for people to pay their taxes, e.g. through providing pre-filled tax returns.	11.3	12.5	22.3	23.4	27.4	1.3	1.8
7	Making it easier to legitimately do small or occasional jobs would reduce undeclared work.	6.7	7.8	22.5	27.1	32.6	1.5	1.8
8	Undeclared work would be reduced if people were allowed to deduct from the taxes they owe some of the costs of paying for household services (e.g., babysitting, cleaning, elderly care, cooking, gardening, tutoring).	6.0	8.1	19.3	26.4	36.9	1.8	1.5
9	More inspections are required at employers' premises to tackle the problem with undeclared work.	7.8	8.3	20.1	22.5	38.0	2.2	1.1
10	Increasing penalties up to imprisonment for people caught doing undeclared work is likely to reduce its prevalence.	29.3	13.1	17.5	18.1	19.0	1.7	1.3
11	If the Tax Office was encouraging to those who have difficulty	6.3	7.4	20.2	24.5	38.0	1.8	1.8

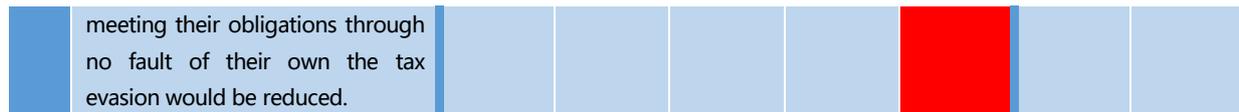


Table 11 Taxpayers’ attitude towards various strategies for tackling undeclared work in Croatia, % of survey respondents

Source: Authors’ own calculations based on the representative survey of 2,000 individuals in Croatia

Croatians also widely support change in the way the tax authorities treat taxpayers. Explicitly, every third participant strongly agreed with the statement that ensuring a sense of fairness in how people are treated by the tax authorities would reduce evasion of taxes and social contributions. Furthermore, 26.5% of the participants agreed to a certain extent with this idea (i.e. answer ‘4’), thus suggesting that it would be quite beneficial if the Tax Administration pursues collaboration rather than mere coercion.

There are also some other results suggesting that a lot can be done by improving the invisible psychological contract between the state and citizens, primarily with respect to trust in public institutions. For instance, 34.5% of the participants strongly agreed with the notion that higher trust in the government would increase voluntary compliance among taxpayers, while only 10.9% completely disagreed with this statement.

Yet a much lower level of agreement was reached in the case of the public budget transparency. Some 45% were certain that this indirect strategy for tackling undeclared work would yield desirable results, while 30% did not share such a belief. A further 21.9% were not certain about the exact effect of increased transparency in public spending.

Croatian citizens widely believe that there is a significant room for improvement in the business environment. Most were certain that making it easier to legitimately do small or occasional jobs would reduce undeclared work. Almost one third strongly agreed with this statement, while a further 27.1% were fairly confident that this would indeed be a good way forward. On the other hand, only 14.5% of the participants disagreed with this idea.

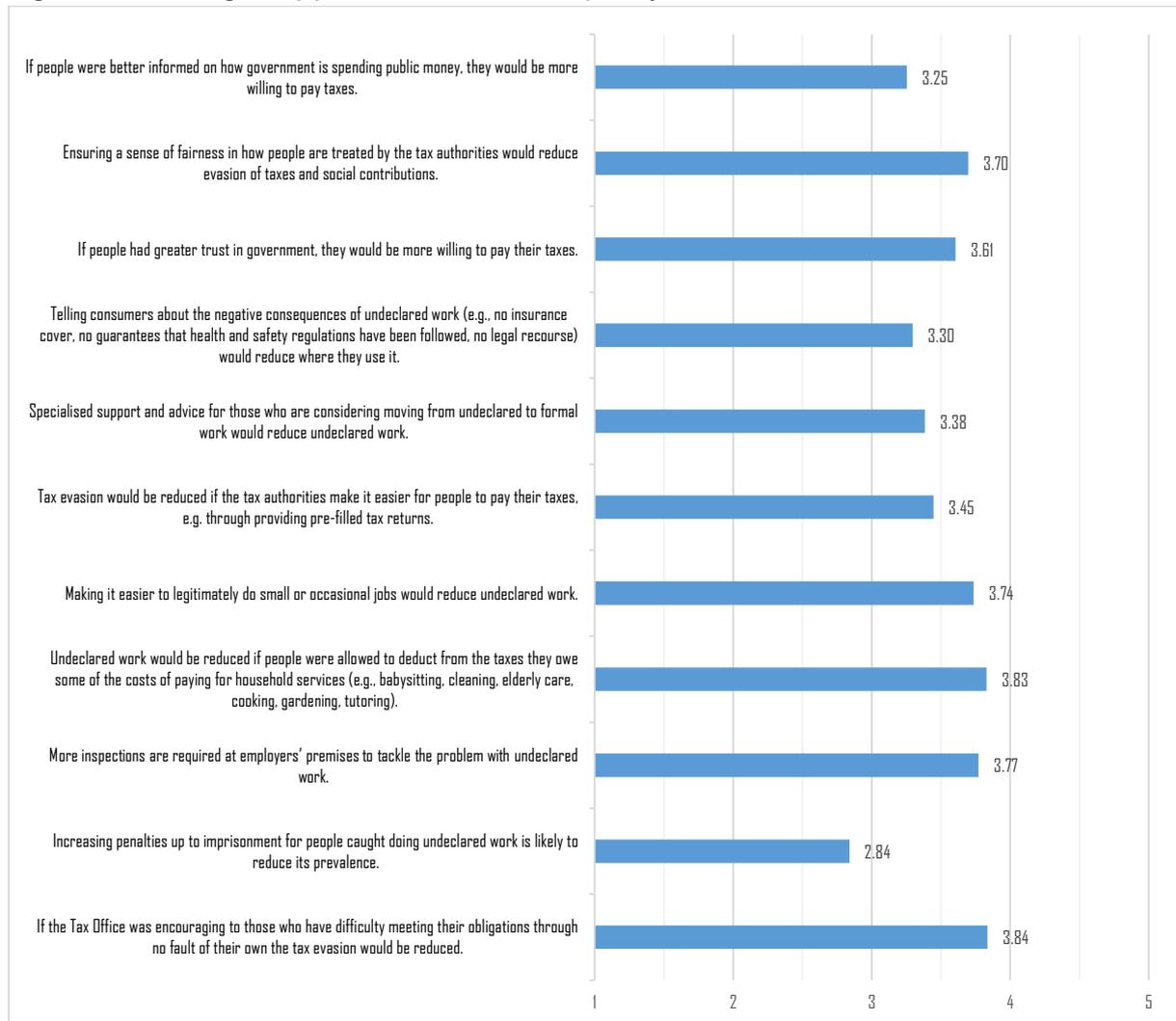
Finally, there seems to be a slightly lower support for awareness raising campaigns targeting consumers, as well as for specialised advisory services for those considering shifting from undeclared to declared work. For instance, in most cases respondents were not certain about the effectiveness of the awareness raising campaigns, as illustrated in Table 11. Instead, the surveyed individuals were more confident that various tax deductions would result in a lower demand for undeclared goods and services. Namely, 36.9% of the respondents strongly agreed that this would be a correct strategy to combat tax evasion and further 26.4% agreed to a certain extent.

To simplify the comparison of perception towards these policy approaches, we also calculated the average level of support for each of the eleven suggested measures. The results presented in Figure 35 confirm that the strategy of increased penalties does not enjoy widespread support among Croatians. Indeed, this specific measure received an average rating of 2.84, which is by far the lowest score among the offered policy measures.

Although having somewhat higher average rating, increased public budget transparency also seems not to be an effective tool for reducing tax evasion in the eyes of Croatian citizens. A similar conclusion can be drawn in the case of awareness

raising campaigns targeting consumers of undeclared goods and services, with a mean score of 3.3.

Figure 35 Average support for the chosen policy measures (undeclared work)



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

On the other hand, the changes in the way the tax administration operates was recognised as a highly effective policy approach. The strategy of more collaboration and less coercion on the part of tax inspectors received the highest average rating (3.84), while increasing fairness in the treatment by the tax administration also received quite a high level of support (3.7). Other measures with substantial average

support include tax deductions for various household services (3.83), increased inspections at employers' premises (3.77) and the reduction of administrative burden for small and occasional jobs (3.74).

7.2 The way forward in reducing reliance on personal connections in Croatia – summary of the survey respondents' perceptions

An identical approach to the above was repeated in the case of pulling strings to circumvent official channels to get things done. Explicitly, each respondent was offered a set of statements and asked to express their level of agreement with them on a 5-point Likert scale:

Now I would like to know your level of agreement with the following statements. For each of them please tell me to what extent do you agree or disagree with the statement: '1' means strongly disagree and '5' means strongly agree

However, this time the list of possible conducts was limited only to three rationales for people to circumvent rules by pulling strings. These were: administrative barriers; lack of information on the required procedures; and unequal treatment by public institutions.

Table 12 Taxpayers' attitude towards various strategies for reducing reliance on personal connections in Croatia, % of survey respondents

		1 strongly disagree	2	3	4	5 strongly agree	Refusal	Do not know
1	Complicated bureaucratic procedures are one of the main	8.9	8.6	21.7	20.5	38.1	0.8	1.4

	reasons for resorting to the use of connections							
2	Ensuring the sense of fair treatment in public and government institutions would reduce the use of connections	4.9	6.5	16.0	22.1	48.6	0.7	1.2
3	If people were better informed of the procedures in place, they would not resort to the use of connections to achieve certain things	11.8	13.1	21.3	20.5	30.5	1.1	1.7

Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

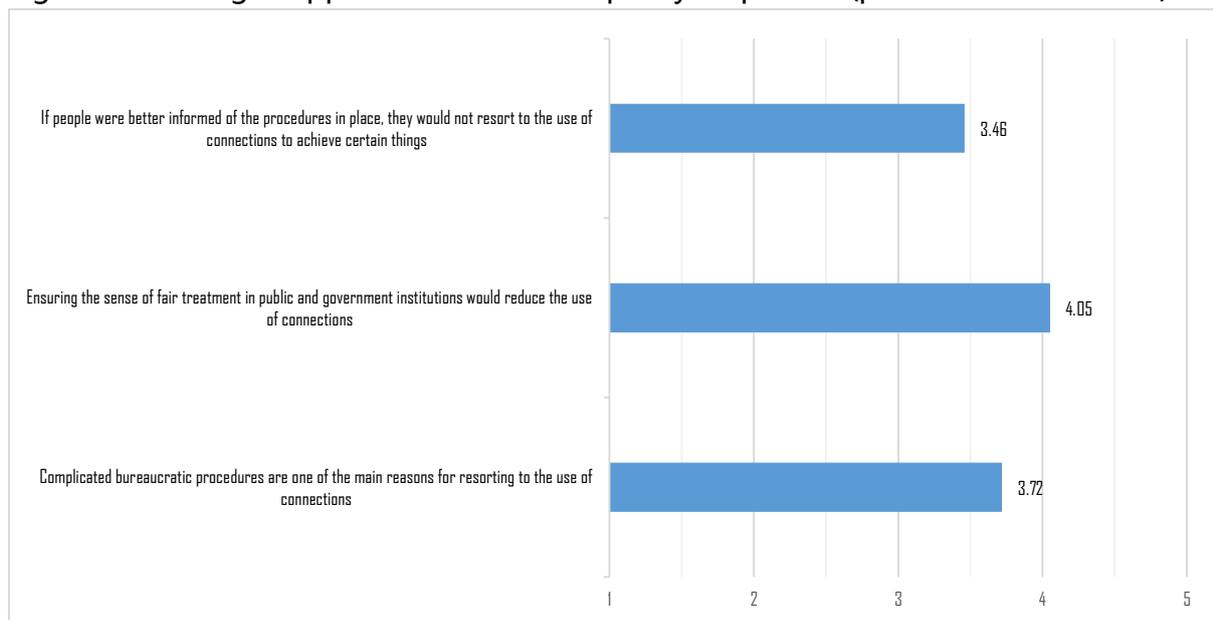
The results presented in Table 12 suggest that there is a slightly higher level of agreement among Croatians in this respect than was the case with measures to tackle undeclared and under-declared work. One can see that people mostly tended to agree with all three statements, although it seems that the issue of fairness is particularly important in this respect from the perspective of citizens. Every second respondent expressed a firm belief that ensuring the sense of fair treatment in public and government institutions would reduce the use of connections. Additional 22.1% of the participants were somewhat certain that reliance on personal connections can be reduced by increasing fairness of the system. On the other hand, less than 4.9% of the participants completely refuted this idea, while further 6.5% were to a certain degree confident that the given causal relationship does not hold true in Croatia.

At the same time, the simplification of administrative procedures was recognised as a praiseworthy step forward by almost 60% of respondents; 38.1% of the participants argued that complicated bureaucratic procedures are one of the main reasons for resorting to the use of connections in Croatia, while a further 20.5% expressed moderate persuasion regarding the validity of this assertion. On the other hand, only

17.5% of the surveyed individuals expressed more or less negative attitude in this respect, while 21.7% were neutral.

Although the positive effect of improvements in delivery of essential information in this respect was also recognised by a majority of Croatians, agreement was much lower than with the previous two statements. Even though 50% of the participants partially or completely agreed that this would reduce the use of connections, almost one quarter did not share this opinion at all. In addition, there was also a non-negligible portion of individuals who were not certain about the exact effect this change would have on prevalence of personal connections.

Figure 36 Average support for the chosen policy responses (personal connections)



Source: Authors' own calculations based on the representative survey of 2,000 individuals in Croatia

This dispersion is additionally illuminated by Figure 36, which provides average ratings for these three statements. As is noticeable, the improved provision of information received an average rating of 3.46, which is quite low in comparison with the remaining two claims. For instance, simplification of bureaucratic procedures has

the average rating of 3.72, thus indicating high level of agreement among citizens with respect to effectiveness of such an approach towards reduction of reliance on personal connections. As expected, the idea that the phenomenon of pulling strings to have things done would be efficiently reduced by ensuring the sense of fair treatment in public and government institutions received the greatest average rating of 4.05.

The most effective approach for tackling illegitimate economic practices in Croatia from the perspective of

- ✓ According to respondents, the tax administration should shift the focus from coercion to collaboration.
- ✓ There is a need to increase the number of inspections in the opinion of Croatian citizens.
- ✓ Increasing penalties for offenders was not recognised by citizens as a good way forward.
- ✓ Tax deductions for purchasers have a potential to reduce demand for undeclared goods and services according to the
- ✓ The fight against undeclared work should be concentrated on reducing the gap between the state and citizens.
- ✓ Ensuring a sense of fair treatment in public institutions is recognised as the most effective approach to reduce the use of connections.
- ✓ People also generally agree that simplification of bureaucratic procedures and enhanced provision of information would be a significant step forward in reducing reliance on personal connections.

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