



European Platform  
tackling undeclared work

# **Horizon scanning: early warning signals of future trends in undeclared work**

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## EXECUTIVE SUMMARY

This report documents how policy makers in EU Member States and enforcement authorities can undertake 'horizon scanning' to identify trends in undeclared work.

On the one hand, an early warning system is developed for policy-makers in EU Member States. This identifies the macro-level changes that are (1) threats and risks to the growth of each type of undeclared work, and (2) strengths and opportunities for reducing each type of undeclared work.

On the other hand, the types of assessment of trends in undeclared work that Member State enforcement authorities can undertake are identified, followed by a review of the early interventions that enforcement authorities have taken in response to specific negative signals, to facilitate mutual learning across Member States.

### Horizon scanning: an early warning system for EU Member States

To develop an early warning system of future trends in undeclared work, firstly, the different theoretical explanations for its growth or decline are reviewed, secondly, the different structural determinants identified in each theoretical explanation, and thirdly, the empirical evidence on whether the structural conditions identified in theory have been found in practice to be determinants of firstly, undeclared work, secondly, under-declared employment and thirdly, bogus self-employment.

The main findings are that the threat and risk of undeclared work can be reduced by:

#### (i) Improving the characteristics of **formal institutions** through:

- Reducing **formal institutional resource misallocations and inefficiencies** by:
  - Improving government effectiveness and the quality of public services;
  - Reducing the perceived and actual levels of public sector corruption;
- Tackling **formal institutional voids and weakness** by:
  - Improving the level of development (in terms of GDP per capita; household consumption per capita; improving human development in terms of a long and healthy life and a decent standard of living, and improving social progress in terms of human basic needs, wellbeing and opportunities);
  - Improving state intervention in work and welfare (in terms of simplifying compliance, and increasing government expenditure, especially on social contributions and active labour market policies), and
  - Reducing poverty and income inequality;
- Enhancing **formal institutional power** by:
  - Improving the rule of law, voice and accountability, perceptions of regulatory quality, and trust in government; and
- Reducing **formal institutional instability and uncertainty** by:
  - Improving the transparency of government policymaking and reducing perceptions of political instability and risk.

#### (ii) Improving the characteristics of **informal institutions** by:

- Increasing the level of **tax morale** (i.e., reducing the acceptability of undeclared work);
- Increasing the level of **horizontal trust between citizens** (i.e., the view that other citizens are compliant); and
- Improving **social capital** in terms of social relationships, social norms, and civic participation.

Analysing these early warning signals over the past 10 years for which data is available (2009-2018), charts are provided for every Member State of the positive macro-level changes that signal a likely future decline in undeclared work and the negative macro-level changes where action is required to prevent a likely future growth in undeclared work. Although the focus here is upon the actions required by each individual Member State, some general findings are:

- **Formal institutional resource misallocations and inefficiencies**

- Some Member States are registering improvements on all measures of government effectiveness and the level of public sector corruption (e.g., Bulgaria, Czechia, Germany, Estonia, Latvia, Lithuania, Luxembourg, Poland, and Romania), signalling a resultant decline in undeclared work, whilst all these measures have worsened in other Member States (e.g., Cyprus, Hungary, Finland, Malta, Slovenia, and Sweden), signalling the need for action on improving government effectiveness and perceptions of public sector corruption to prevent the future growth of undeclared work.

- **Formal institutional voids and weaknesses**

- In most Member States, indicators of development such as GDP per capita, the Human Development Index, and Social Progress Index have improved, signalling over time a lower prevalence of undeclared work.
- There have been improvements across most Member States in business flexibility and reducing the regulatory burden, which is conducive to a reduction over time in undeclared work.
- All Member States have reduced the expense of government (as a % of GDP), signalling a growing risk of an expansion in undeclared work.
- In terms of the level of social contributions and the impact of social transfers on poverty reduction, the situation has worsened in two-thirds of Member States on one or other of these structural conditions, whilst for one-third of Member States both conditions have worsened (e.g., Belgium, Croatia, Denmark, France, Hungary, Ireland, Luxembourg, Malta, Portugal, Romania, Slovenia, Spain, and Sweden), signalling that this is a common risk across many Member States for an expansion in undeclared work.
- Most Member States have reduced the rate of severe material deprivation and the number of people at risk of poverty or social exclusion, reducing the risk of undeclared work, but only a half of Member States have reduced income inequality, which is a common area for action to reduce the threat of a growth in undeclared work.
- Improvements in employment participation, unemployment and labour productivity in most Member States are conducive to bringing about declines in undeclared work.

- **Formal institutional powerlessness**

- Regulatory quality and the rule of law have worsened in more than two-thirds of Member States, signalling a greater risk of an expansion in undeclared work.
- Trust in government has generally improved across Member States, signalling a reduced risk of undeclared work, but in seven Member States trust in both government and Parliament has decreased (e.g., Bulgaria, Cyprus, Denmark, Greece, Luxembourg, Slovakia, and Spain), signalling the need for action to prevent a growth in undeclared work.

- **Formal institutional instability and uncertainty**

- The transparency of government policymaking, instability and political uncertainty has generally worsened, which suggests a greater threat of

undeclared work, with only 8 out of 27 countries registering improvements (e.g., Bulgaria, Cyprus, Estonia, France, Germany, Ireland, Latvia, and Lithuania).

- The political stability indicator worsened in more than half of the Member States, indicating the need for action to prevent the growth of undeclared work.

- **Informal institutions**

- The acceptability of undeclared work is higher in 2019 compared with 2013 in most Member States, signalling that common action is required to raise awareness about the benefits of declared work and costs of undeclared work, to prevent its further growth.
- The horizontal trust between citizens decreased with more citizens asserting in 2019 compared with 2013 that they personally know other people working undeclared. Indeed, the trust in others to be compliant is higher when the respondent does not have acquaintances who undertake undeclared work (i.e., the respondent trust in others not to engage in undeclared work). This signals that undeclared work will grow unless common action is taken across Member States to improve horizontal trust.

### **Assessing trends in undeclared work in enforcement authorities and early interventions**

To improve the assessment of trends in undeclared work in enforcement authorities in order to provide early warning signals, the findings are that:

- Enforcement authorities should make greater use of the databases available to them, namely: (i) records of inspections, (ii) data bases such as employment registers, tax return data and social insurance datasets, and (iii) surveys, to identify predictive trends.
- **Records of inspections and their outcomes** (i.e., inspection registers or case management databases) can be used to compare year-on-year the violations found in different localities, sectors, occupations, firm sizes, etc. This aggregate-level analysis of the results of inspections can provide valuable data on whether the detection of violations (or some specific type of violation) is becoming more common over time in specific sectors, occupations, localities, and less common in others, so that patterns can be deciphered of the trends. This provides an early warning signal of where resources need to be concentrated in the immediate future.
- **Enforcement authority data bases**, such as employment registers, tax return data, social insurance datasets, can also be analysed (either individually or by combining them) to identify risky sectors, occupations, localities, etc. To do so, the same indicators/red flags and risk assessment methods can be used to analyse the data in aggregate to identify the areas for action (e.g., sectors, occupations, localities), as are used when identifying individual 'risky' businesses.
- **Surveys of undeclared work**, especially if regularly conducted over time, can be used to identify trends in undeclared work and early warning signals of where it might be growing and declining. An exemplar is the special Eurobarometer surveys on undeclared work conducted in 2007, 2013 and 2019.
- In the longer term, there is a need to shift from this pragmatic approach using the data available to a more **strategic approach** towards horizon scanning. Enforcement authorities need to consider the data required to identify each type of undeclared work they wish to tackle (e.g., unregistered employment, envelope wages, bogus self-employment), the possible sources of such information/data, and how it can be acquired.

- More **sophisticated forecasting methods** are also required beyond linear extrapolations of the past to predict the future. 'Future basing', scenario-building, simulations, experimental laboratory studies of different scenarios and behavioural analyses need to be explored.
- It is important to **share findings** across enforcement authorities within a Member State and between Member States so that everyone can get early warning on emerging trends, as they are first noticed on the ground.
- There is a need for this **learning to be shared** across Member States on assessing trends in undeclared work. This is a relevant issue for the European Labour Authority which is an ideal host for such future-oriented risk analysis to be developed.
- Member State enforcement authorities need to be better trained in such future-oriented risk analysis and therefore **capacity building** through mutual learning is required.

The findings on early interventions adopted by enforcement authorities in response to negative signals are that:

- The **interventions adopted** in response to early warning signals have been largely singular interventions. The choice of which intervention to use has not in general been based on an evidence-based approach of what works and what does not. Moreover, few examples exist of a shift away from singular interventions to multiple interventions composed of a mix of deterrence measures, incentives and education and awareness raising initiatives.
- An **evidence-base of the effectiveness of policy interventions**, based on detailed impact evaluations, would be a useful development for the European Labour Authority. The current 'knowledge bank' of good practices compiled by the European Platform tackling undeclared work reveals the lack of rigorous ex-post and ex-ante evaluations of the effectiveness of policy interventions, and therefore a lack of evidence-based knowledge on what works and what does not.

### **Afterword: impacts of the COVID-19 pandemic on early warning signals**

Highly disruptive events such as the COVID-19 pandemic have a profound impact on economies, businesses, and workers. Various macro indicators will have changed significantly.

However, the statistical significance of the impacts of each macro indicator on the level of undeclared work has not changed as a result of the pandemic and neither has the direction of the association (i.e., whether a decline in a macro indicator leads to a growth or decline in undeclared work). For example, a decrease in GDP, registered by most countries, still leads to an increase in undeclared work. Similarly, an increase in active labour market policy expenditure such as on the short-term job retention schemes or financial and tax relief for the affected enterprises) still decreases undeclared work. The COVID pandemic has not changed that a decline in GDP leads to a growth in undeclared work or a growth in active labour market policy interventions reduces undeclared work.

What is not known and is difficult to assess at the present moment in time, for example, is whether the level of active labour market intervention policies has been sufficient to prevent the growth of undeclared work and therefore to know the overall impact of COVID-19 on undeclared work.

# 1 INTRODUCTION

Horizon scanning is the systematic examination of various trends and other developments in order to detect early signs of potential threats or opportunities on a specific issue (European Commission, 2015). Horizon scanning is a useful tool to complement the traditional planning process and 'may combine different approaches, such as the search for weak signals, emerging issues, anticipatory signals, and interdependencies' (European Commission, 2015: 4).

This report documents how policy makers in EU Member States and enforcement authorities can undertake 'horizon scanning' to identify developments that might threaten an increase in undeclared work. Such knowledge can enable Member States to be pro-active by taking early interventions at both the policy level and in the enforcement area to prevent its growth.

To achieve this, the report sets out how horizon scanning can take place on two levels to provide early warning signals of a growth in undeclared work and allow early interventions to occur. On the one hand, an early warning system is developed for policy-makers in EU Member States. This identifies the macro-level changes at a Member State level that are (1) threats and risks to the growth of undeclared work, and (2) strengths and opportunities for reducing undeclared work. On the other hand, this report identifies the type of assessment of future trends in undeclared work that can be undertaken by enforcement authorities in Member States and reviews some of the early interventions that various enforcement authorities have taken in response to specific negative signals, to facilitate mutual learning across Member States.

Therefore, the aim of this report is to identify how policy makers and enforcement authorities can identify early warning signals of developments that may lead to a growth or decline of undeclared work. The specific objectives are to answer the following questions:

- ***What are the key structural developments associated with a growth or decline of undeclared work in the EU?*** What are the different theoretical explanations for the growth and decline of undeclared work? What structural developments do these theoretical explanations assert determine the growth or decline of undeclared work? What have previous empirical studies found to be the key structural economic and social conditions associated with a growth or decline of undeclared work, both in the EU as well as other global regions? How can these findings translate into an early warning system of structural developments that may lead to a growth or decline of undeclared work in the EU?
- ***What does this early warning system tell us about current developments that may lead to the growth or decline of undeclared work in the EU?*** Taking each Member State in turn, what are the current signals of developments that may lead to potential threats for increasing undeclared work?
- ***What type of horizon scanning and early intervention can enforcement authorities undertake?*** What type of negative signals can and should policy makers and enforcement authorities use to identify a potential growth in particular types of undeclared work? What initiatives can and have enforcement authorities implemented in response to specific negative signals? What are the lessons for policy makers and enforcement authorities in other Member States?

Part I engages in horizon scanning by developing an early warning system for policy makers in EU Member States. Section 2 briefly reviews the different theoretical explanations for undeclared work and the structural determinants that each theoretical perspective identifies as important structural drivers of undeclared work. Section 3 then moves from theory to practice by reviewing the evidence on whether these structural conditions have been found in practice to be determinants of firstly, undeclared work, secondly, under-declared employment and thirdly, bogus self-employment. Having reviewed the evidence on which structural conditions have been found to be drivers of



undeclared work, section 4 then identifies indicators in existing data sources that can be used to evaluate the trends in these structural conditions across EU Member States. This is followed in section 5 by a review of the current trends in these structural conditions across EU Member States, to provide early warning signals of the trends in each Member State that suggest a future growth or decline in firstly, unregistered employment, secondly, under-declared employment and thirdly, bogus self-employment.

Part II then turns attention to how enforcement authorities can assess future trends in undeclared work and take early interventions to prevent the growth of undeclared work. Section 6 identifies how enforcement authorities can assess future trends in undeclared work and reviews the various early warning signals whilst section 7 provides case studies of a range of early interventions that enforcement authorities have taken to negative signals received, to enable mutual learning across Member States.

However, a caveat is required. Highly disruptive events such as the respiratory disease (COVID-19), declared a pandemic in March 2020 by the World Health Organisation, have a profound impact on economies, businesses, and workers. Therefore, various macro indicators changed significantly. However, the very important point to recognise is the fact that the statistical significance of the impacts of the macro indicators on the level of undeclared work will not have changed as a result of the pandemic and neither will the direction of the association (i.e., whether a decline in a macro indicator leads to a growth or decline in undeclared work). For example, the decrease in GDP, registered by most countries worldwide, suggests an increase in undeclared work. Similarly, an increase in active labour market policies (such as the short-term job retention schemes or financial and tax relief for the affected enterprises) leads to a decrease in undeclared work. The COVID pandemic has not changed that a decline in GDP leads to a growth in undeclared work or a growth in active labour market policy interventions reduces undeclared work. What is not known and is difficult to assess at the present moment in time, for example, is whether the level of active labour market intervention policies has been sufficient to prevent the growth of undeclared work and therefore to know the overall impact of COVID-19 on undeclared work.

## PART I: HORIZON SCANNING: AN EARLY WARNING SYSTEM FOR EU MEMBER STATES

### 2 THEORETICAL EXPLANATIONS FOR UNDECLARED WORK: COMPETING VIEWS ON STRUCTURAL DETERMINANTS

To develop an early warning system, this section briefly describes the different theoretical explanations of undeclared work and the structural determinants identified as important drivers of undeclared work by each theoretical perspective.

Scholarship on the undeclared economy has increasingly adopted the lens of ***institutional theory*** to explain participation in undeclared work (Baumol and Blinder, 2008; Helmke and Levitsky, 2004; North, 1990). According to this perspective, all societies have both formal institutions (i.e., laws and regulations) as well as informal institutions (i.e., beliefs and norms). Undeclared work occurs when there is an asymmetry between the formal 'rules of the game' and the beliefs, norms and values of citizens, workers and businesses about what is acceptable behaviour (i.e., informal institutions) (Webb et al., 2009: 495). As such, in order to reduce participation in undeclared work, there is a need to align wider beliefs about what is acceptable with the formal rules of the game.

This requires the determinants of this asymmetry to be identified. On the one hand, the characteristics of formal institutions that cause higher levels of undeclared work need to be identified. On the other hand, the characteristics of informal institutions that cause higher levels of undeclared work need to be understood.

Starting with the **characteristics of formal institutions** that cause higher levels of undeclared work, there are three main competing theories of undeclared work which each identify different characteristics of formal institutions<sup>1</sup>. Firstly, **modernisation theory** views undeclared work to result from economic underdevelopment and a lack of modernisation of government. As such, undeclared work is generated by structural conditions including: low GDP per capita (Feld and Schneider, 2010; Teobaldelli, 2011); weak quality of government in terms of redistributive justice, by which is meant whether citizens, workers and businesses consider that they receive the goods and services they deserve in return for the taxes paid (Kinsey and Gramsick, 1993; Richardson and Sawyer, 2001), procedural justice, by which is meant whether they perceive themselves to be treated by government in a respectful, objective and responsible manner (Hartner et al., 2008; Murphy, 2005), and procedural fairness, which is meant whether they perceive themselves to pay a fair share of taxes relative to others (Bird et al., 2006; McGee et al., 2008); low capacity of formal institutions to enforce the law and regulations (Webb et al., 2009); frequent changes in laws and regulations (Levitsky and Murillo, 2009), and the prevalence of public sector corruption (Round et al., 2008; Smith et al., 2012). Secondly, **'over-intervention' theory** depicts undeclared work to result from over-regulation of the economy, such as high taxes and a burdensome regulatory environment which increases the cost, time and effort associated with declared work (Becker, 2004; De Soto, 2001; Perry and Maloney, 2007). Third and finally, **'under-intervention' theory** conversely views undeclared work to result from under-intervention or inadequate state intervention in work and welfare, resulting in a low level of worker protection, leaving workers highly dependent on undeclared work as a survival strategy (Davis, 2006; Slavnic, 2010).

The characteristics of formal institutions in these theories that cause a growth of undeclared work can be grouped in the following categories: **(i) formal institutional resource misallocations and inefficiencies** comprising indicators measuring the lack

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<sup>1</sup> This report includes indicators for evaluating all three main competing theories. The empirical evidence extracted from an extensive literature review provides support to a greater extent to modernization theory and 'under-intervention' theory.

of modernization of government and corruption; **(ii) formal institutional voids and weaknesses** including measures of state intervention in work and welfare, **(iii) formal institutional powerlessness** measuring the capacity to enforce law and regulations and the ability to provide incentives to encourage compliance, and **(iv) formal institutional instability and uncertainty** measuring the frequency of changing the laws and regulations (Williams, 2017).

The **characteristics of informal institutions** also cause higher levels of undeclared work. A key characteristic is whether various undeclared work practices are deemed socially acceptable by citizens, workers and businesses. To measure this, a commonly used indicator in the literature is **tax morale**, defined as the intrinsic motivation to pay taxes (also referred as civic duty) (Orviska and Hudson, 2003; Torgler, 2012; Torgler and Schneider, 2007a). The finding is that a low level of tax morale is associated with high participation in various forms of undeclared work such as unregistered employment (Williams and Horodnic, 2017a; Windebank and Horodnic, 2017), envelope wages (Williams and Horodnic, 2015d, 2017c) as well as other non-compliant behaviours such as tax evasion (Brink and Porcano, 2016; Dell'Anno, 2009) or shadow economy (Halla, 2012; Torgler and Schneider, 2007a). Given the important role of tax morale in explaining participation in undeclared work, many studies have investigated what determines tax morale, and consequently, influences participation in undeclared work. A recent systematic review of more than 80 studies reveals that the most important determinant of tax morale is trust.

Increasingly, two types of trust are deemed as determining the level of undeclared work. On the one hand, there is **vertical trust**, by which is meant the trust of citizens, workers and businesses in public institutions (e.g., government, the legal system, tax authorities). On the other hand, there is **horizontal trust**, by which is meant the trust that citizens, workers and businesses have that others are being compliant, often measured in terms of their perceptions of the level of undeclared work in a society (see Horodnic, 2018).

To evaluate these views on the determinants in different theoretical perspectives, the next section examines the empirical evidence to see which of these determinants have been found to be significantly associated with higher levels of different types of undeclared work.

### 3 EVIDENCE-BASED EVALUATION OF KEY STRUCTURAL DETERMINANTS: A COMPREHENSIVE REVIEW

#### 3.1 Introduction

To develop the early warning system, which can be updated annually in future, **three steps** have been undertaken.

The **first step** is that a comprehensive review of the empirical evidence has been undertaken to identify whether the structural determinants stated in each theory are found in practice to be determinants of each type of undeclared work. To do this, the results of previous studies using different data sources, different regional areas and different methods, have been analysed. To identify the relevant studies to be included in this review of the evidence, the Sheffield University's Library Catalogue and Google Scholar search engine were employed. The search criteria were based on the use of various keywords for each form of undeclared work namely: (i) 'unregistered work/employment', 'undeclared work/employment', 'informal employment' and 'shadow economy' for **unregistered employment**; (ii) 'under-reported work/employment/ wages/salaries', 'under-declared work/employment/ wages/salaries' and 'envelope wages' for **under-declared employment/envelope wages** and (iii) 'bogus/false/ dependent self-employed/self-employment' for **bogus self-employment**. The results were displayed by relevance and the first 100 results generated by using these specific keywords screened (NB. for some keywords such as those related with bogus self-

employment, the search yielded fewer results). Only original research papers which analyse the structural determinants of each type of undeclared work were analysed. The papers included are quantitative, analysing the direct link between each type of undeclared work and various structural determinants as identified in each theoretical explanation for undeclared work. Due to data availability issues, some of these empirical studies assessed the effect of the determinants on undeclared work (e.g., where longitudinal data was available or the study was experimental), whereas the rest of these studies assessed the association between the structural determinants and participation in undeclared work (e.g., where only cross-sectional – one point or period of time – data was available). Tables A1 to A3 in the Appendix summarize the results of these empirical studies, showing that similar findings have been obtained in various studies regardless of the geographical area and whether longitudinal or cross-sectional data have been analysed.

The **second step** involved producing a table for each country (included in Table A5 in the Appendix) charting the evolution over the past 10 years of the structural determinants identified in the empirical studies as strongly associated with the prevalence of undeclared work.

Finally, the **third step** involved producing Early Warning Alert tables based on the trends in these structural determinants. The Early Warning Alert tables collate the findings of all the Member States and use a 'traffic light system' to provide early warning alerts of macro-level changes that are likely to lead to a growth in undeclared work unless action is taken.

The results of all three steps are detailed in the following sections.

### 3.2 Undeclared work: determinants

Amongst the three investigated forms of undeclared work, the highest number of previous empirical studies has been identified for unregistered employment. **Unregistered employment** here refers to an employment relationship which is not registered with the authorities when it should be registered. Such employees often do not have written contracts or terms of employment and their remuneration is most probably undeclared in nature. The findings of these studies on unregistered employment are summarised in Table A1 in the Appendix.

Starting with the **characteristics of formal institutions**, the main findings are that unregistered employment is more prevalent when there are:

- (i) Greater **formal institutional resource misallocations and inefficiencies** manifested in:
  - A low level of modernisation of government (measured by the quality of the government, government effectiveness and satisfaction with the government and with the tax system);
  - Greater levels of corruption (measured as the perceived and actual level of corruption).
- (ii) Greater **formal institutional voids and weakness** manifested in:
  - Underdevelopment (measured using GDP per capita, household final consumption per capita, the Human Development Index, Social Progress Index, the quality of capital market and banking sector, entrepreneurship and infrastructure);
  - Burdensome regulations (measured using the intensity of regulation and regulatory burden, bureaucracy and bureaucratic quality and business flexibility);
  - Lower government expenditure and lower expenditure on social contributions (measured by expense of government, healthcare expenditure and various measures of social expenditure and the impact of redistribution via social

transfers as well as expenditure on labour market interventions aimed at correcting disequilibria); and

- Higher levels of poverty (measured population at risk of poverty, severe material deprivation, income inequality indicators).

In terms of the taxation level as a determinant of unregistered employment, the results are inconclusive. Many studies find no significant association, although others find some correlation, albeit some positively and some negatively.

**(iii) Greater formal institutional powerlessness** manifested in:

- Lower levels of perceived rule of law, voice and accountability, regulatory quality, quality of police, and public trust in authorities;
- Lower incentives such as a low return level of pension contribution.

**(iv) Greater formal institutional instability and uncertainty** manifested in:

- Low transparency of government policymaking and high instability and political risk.

Turning to the *informal institutions*, the main findings are that participation in unregistered employment is higher when there are:

- Low levels of tax morale (i.e., a high acceptability of undeclared work practices);
- Low levels of horizontal trust (measured as knowing other people working undeclared); and
- Lower levels of social capital.

### 3.3 Under-declared employment: determinants

Under-declared employment occurs when formal employers pursue the illegal practice of reducing their tax and social security payments, and therefore labour costs, by under-declaring the remuneration of employees. This occurs when employers pay their formal employees two salaries: an official declared salary and an additional undeclared ('envelope') wage which is hidden from the authorities for tax and social security purposes. Alternatively, an employer can under-declare the number of hours an employee works, such as to evade paying the minimum wage.

The findings of the empirical studies investigating under-declared employment are summarised in Table A2 in the Appendix. Even if a lower number of structural determinants have been identified, the findings resemble the main results identified for unregistered employment and the determinants overlap.

The only notable differences are those related to the taxation level and incentives to encourage adherence to the formal rules. Whilst for unregistered employment the studies are inconclusive on the effect of taxation, the finding on under-reported employment is that lower taxes (not higher) are associated with a higher prevalence of under-declared employment. Meanwhile, no association has been identified between providing incentives to encourage adherence to the formal rules (measured by the pension sustainability index) and the prevalence of under-declared employment.

### 3.4 Bogus self-employment: determinants

Bogus self-employment, often referred to as false self-employment or dependent self-employment, is commonly understood as involving persons/workers registered as self-employed whose conditions of employment are de facto dependent employment. National

legislation and/or court decisions determine this status. This employment status is used to circumvent tax and/or social insurance liabilities, or employers' responsibilities<sup>2</sup>.

Analysing the findings on bogus self-employment, a relatively small number of previous empirical studies investigate the structural determinants of bogus self-employment. Instead, most previous studies concentrate on the criteria to define and measure this phenomenon. Despite this, there is still no consensus (Williams and Horodnic, 2019). Some studies define as dependent self-employment those situations where a self-employed person undertakes the same work and for the same organisation where they were previously employed (e.g., Román et al., 2011; Thörnquist, 2013), while in other studies this is referred to as bogus self-employment (e.g., Bekker and Posthumus, 2010; Bengtsson, 2016; Wickham and Bobek, 2016). Therefore, to be able to provide a comprehensive overview of the structural determinants, we here included studies calling this employment relationship both dependent and bogus self-employment.

The results are summarised in Table A3 in the Appendix. A limited number of indicators have been identified, with none defining the informal institutions as determinants. However, those determinants identified are similar to those viewed as determining the level of unregistered and under-declared employment and so are the findings.

In terms of taxation level, similar to unregistered employment, the results are rather inconclusive with a large number of studies finding no association whilst others reach contradictory results, with some showing tax reductions increase bogus self-employment and other studies that tax reductions increase bogus self-employment. For example, a study of the effect of a legislation change in Romania that equalised the costs to employers of employing a dependent employee and a self-employed person on a contract for services revealed that the number of self-employed persons decreased and the number of new employment contracts increased after introducing the new legislation (Williams and Horodnic, 2017d). Two new indicators not included for other types of undeclared work have been identified. The first is that higher R&D expenditures decrease the share of dependent self-employed in total self-employment. Indeed, higher R&D expenditures increase the shares of self-employed with employees and that of opportunity self-employed and decrease the shares of dependent self-employed and necessity self-employed (Burke et al., 2019). The second is that fiscal incentives (in terms of tax subsidies for start-ups and tax reliefs) stimulate both the employer and employee to choose the option of bogus self-employment instead of dependent employment.

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In sum, the main structural determinants of all types of undeclared work are: (i) the **characteristics of formal institutions** associated with: formal institutional resource misallocations and inefficiencies; formal institutional voids and weaknesses; formal institutional powerlessness, and formal institutional instability and uncertainty, and (ii) **characteristics of informal institutions** associated with low levels of vertical trust, horizontal trust and social capital.

Reviewing the evidence on whether these structural conditions have been found in practice to be determinants of firstly, undeclared work, secondly, under-declared employment and thirdly, bogus self-employment, the finding is that the results are similar for the different types of undeclared work. The next section provides a summary of these structural determinants and the indicators used to chart their evolution over the past ten years in each Member State.

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<sup>2</sup> European Platform tackling undeclared work: Glossary, based on *OECD (2014). Employment Outlook 2014. Paris: OECD.*



## 4 STRUCTURAL DEVELOPMENTS IN MEMBER STATES: RELEVANT INDICATORS AND DATA SOURCES

Collating the determinants of undeclared work identified in previous studies as strongly associated with the prevalence of each type of undeclared work and taking into account the availability of data at EU level, the following indicators have been used (the precise indicators and data sources are listed in Table A4 in the Appendix):

### (i) Formal institutions

- **Formal institutional resource misallocations and inefficiencies:**
  - Level of modernisation of government (government effectiveness);
  - Corruption (Corruption Perceptions Index, Control of corruption).
- **Formal institutional voids and weakness:**
  - Level of development (GDP per capita, the Human Development Index, Social Progress Index, Self-employment as % of total employment; Unemployment rate as % of active population; Labour productivity);
  - Regulations (Burden of government regulation; Restrictive labour regulations; and Business flexibility);
  - Government expenditure and expenditure on social contributions (Expense of government as % of GDP; Research & Development expenditure as % of GDP; Impact of social transfers on poverty reduction, Labour market policy expenditure as % of GDP);
  - Poverty level (Population at risk of poverty, Severe material deprivation, Inequality of income distribution and Gini coefficient); and
  - Taxation (Tax revenue as % of GDP and Social contributions as % of revenue).
- **Formal institutional powerlessness:**
  - Rule of law, Judicial independence, Voice and accountability, Regulatory quality, Reliability of police services; and
  - Public trust in authorities (Trust in Government; Trust in Parliament).
- **Formal institutional instability and uncertainty:**
  - Transparency of government policymaking and stability (Democracy Index and Political stability).

### (ii) Informal institutions:

- Tax morale (i.e., acceptability of undeclared work);
- Horizontal trust (i.e., personally know people engaged in undeclared work);
- Social capital.

## 5 CURRENT DEVELOPMENTS: EARLY WARNING ALERTS IN EACH MEMBER STATE

To provide an early warning system for each Member State, a 'traffic light' system' has been here used (see Tables 1 and 2). Given the fluctuations in each macro-level determinant of undeclared work over the past ten years, Table 1 provides a 'traffic light' indicator that compares the changes in each macro-level condition in 2018 compared with 2009, whilst Table 2 provides a 'traffic light' indicator that compares the changes in each macro-level condition over the last three years available, comparing 2018 with 2016. The reason these two tables have been produced is because in many Member

States, some macro-level conditions have improved over the past decade (see Table 1) but have worsened in the last few years, indicating that the threat of a growth in undeclared work has grown in the recent period (see Table 2).

In both Early Warning Alert tables, the 'traffic light' system provides a clear visual portrayal of whether the changes taking place over time in a macro-level condition will impact positively or negatively on the size of the undeclared economy:

- **'Red lights'** signal that the changes over time in a macro-level condition are a **threat** and **risk**, meaning that the changes are likely to lead to a **growth** in undeclared work;
- **'Green lights'** signal that the changes over time in a macro-level condition are a **strength** and **opportunity**, meaning that the changes are likely to lead to a **decline** in undeclared work;
- **'Amber lights'** signal that the changes over time in a macro-level condition are **stable**, meaning that it will cause neither a growth nor decline in undeclared work; and
- **'Grey lights'** (only included in Table 2 charting the trends over the last three available years, 2016-2018) signal that the changes over time in a macro-level condition are **inconclusive**, meaning that there are ups and downs and no consistent trend.

The visual 'traffic light' signals, therefore, are early warning alerts of the macro-level changes within a Member State which will have a positive and negative impact on the size of the undeclared economy.

Table 1 compares the changes in each macro-level condition in 2018 compared with 2009 in each Member State. Examining the formal ***institutional resource misallocations and inefficiencies*** (i.e., government effectiveness and perceived level of corruption), Table 1 displays that some Member States have registering improvements on all these measures (e.g., Bulgaria, Czechia, Germany, Estonia, Latvia, Lithuania, Luxembourg, Poland, and Romania) whilst the situation has worsened in other member States on all these structural indicators (e.g., Cyprus, Hungary, Finland, Malta, Slovenia, and Sweden), meaning that the changes are likely to lead to a growth in undeclared work.

Analysing the ***formal institutional voids and weaknesses***, the finding is that the level of development indicators (e.g., GDP per capita, Human Development Index, and Social Progress Index) have improved in most Member States. Moving to issues related to the regulatory burden, the improvements have been better with respect to increasing the business flexibility and reducing the regulatory burden compared with measures related to the restrictions on the labour market. Turning to total government expenditure and the level of expenditure on social contributions, all Member States reduced the expense of government (as % of GDP) which represents a threat for tackling undeclared work. Similarly, active labour market policy expenditure (as a % of GDP) reduced in most Member States, posing again a threat for tackling undeclared work. In terms of social contributions and impact of the social transfers on poverty reduction, the situation worsened in two-thirds of Member States for each of these structural conditions, with more than one third registering worse figures on both these conditions (e.g., Belgium, Croatia, Denmark, France, Hungary, Ireland, Luxembourg, Malta, Portugal, Romania, Slovenia, Spain, and Sweden). In terms of poverty reduction, the evolution is positive for most Member States with a reduced rate of severe material deprivation and the number of people at risk of poverty or social exclusion. However, in terms of reducing income inequality, only a half of Member States registered progress. On the other hand, the labour market improved, with lower unemployment rates and higher labour productivity for most Member States.

**Formal institutional powerlessness** is a problematic area for more than two-thirds of Member States, where regulatory quality and rule of law (i.e., reflecting government



performance in terms of formulating and implementing policies) has worsened. Trust in public authorities (i.e., vertical trust) mostly improved, and only in 7 Member States did the trust in both government and Parliament decrease over the past 10 years (e.g., Bulgaria, Cyprus, Denmark, Greece, Luxembourg, Slovakia, and Spain).

Turning to the **formal institutional instability and uncertainty**, the measurement of democracy worsened, with only 8 out of 27 countries registering improvements (e.g., Bulgaria, Cyprus, Estonia, France, Germany, Ireland, Latvia, and Lithuania). Similarly, the political stability measure worsened in more than half of Member States.

Finally, evaluating the trend of the indicators measuring the **informal institutions**, the finding is that the acceptability of various forms of undeclared work is higher in 2019 compared with 2013 in most Member States. For example, only in Latvia, Hungary and Poland do a higher number of citizens find unacceptable in 2019 that 'someone partially or completely conceals their income' compared with 2013. Similarly, Table 1 displays a decrease in horizontal trust between citizens. Indeed, in most Member States, more citizens assert in 2019 compared with 2013 that they personally know other people working undeclared.

Table 2 examines the same structural determinants but provides traffic lights for the past three years (2018 compared with 2016). The results broadly reinforce the findings over the past 10 years. However, it is evident that over the past three years, government expenditure (as a % of GDP) and active labour market policy expenditure (as a % of GDP) was either static or declining, posing a risk for the level of undeclared work. Moreover, more effort is also necessary in terms of improving citizens' perceptions on judicial independence, regulatory quality and the reliability of police services. Similarly, many Member States need to put more emphasis on reducing political instability and improving perceptions of democracy.

However, a caveat is required. The determinants included in Table 1 and Table 2 have different levels of impact on undeclared work, depending on the analysed country and time period. Therefore, the same indicators can have a higher impact in a specific country and a lower in a different country. A summary of the results from 12 studies conducted in various regions across the globe and investigating the determinants of shadow economy reveals that, for example, tax morale explains, depending on analysed country, between 22-25 % of the variance in the shadow economy, whereas the quality of state institutions and labour market regulations account for 10-12 % and 7-9 % of the variance in the shadow economy (Feld and Schneider, 2010; Schneider, 2010). As such, the results included in Table 1 and Table 2 are useful for policy-makers in terms of pointing out the indicators which needs to be closely observed and improved considering that they pose a risk to the level of undeclared work. The full picture needs to be analysed, considering the fact that certain policies might influence simultaneously multiple indicators.

**Table 1. Early warning signals: trends (2018 compared with 2009)**

	BELGIUM	BULGARIA	CZECHIA	DENMARK	GERMANY	ESTONIA	IRELAND	GREECE	SPAIN	FRANCE	CROATIA	ITALY	CYPRUS	LATVIA	LITHUANIA	LUXEMBOURG	HUNGARY	MALTA	NETHERLANDS	AUSTRIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	SLOVAKIA	FINLAND	SWEDEN				
A. FORMAL INSTITUTIONS																															
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES																															
1. Level of modernisation of government																															
Government effectiveness (-2.5 to 2.5 (strong performance))	🔴	🟢	🟢	🔴	🟢	🟢	🟢	🔴	🟢	🟡	🔴	🔴	🔴	🟢	🟢	🟢	🔴	🔴	🟢	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴
2. Formal institutions acting in a corrupt manner																															
Corruption Perceptions Index (CPI) (0-100 (very clean))	🟡	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🟢	🟢	🟢	🟢	🔴	🟢	🔴	🔴	🔴	🔴	🔴	
Control of corruption (-2.5 to 2.5 (strong performance))	🟢	🟢	🟢	🔴	🟢	🟢	🔴	🔴	🔴	🔴	🟢	🟢	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🟢	🔴	🟢	🔴	🟢	🟢	🔴	🟢	🔴	🔴	
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES																															
1. Modernisation Explanation - Level of 'development'																															
GDP (current prices, euro per capita)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	
Human Development Index (HDI) (0-1 (highest development))	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	
Social Progress Index (SPI) (0-100 (high))	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟡	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	
Self-employment (% of total employment)	🟢	🟢	🔴	🟢	🟢	🔴	🟢	🔴	🟢	🔴	🟢	🟢	🟢	🔴	🔴	🟢	🟢	🔴	🔴	🟢	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	
2. State intervention																															
Burden of government regulation (1-7 (best))	🟢	🟢	🟢	🔴	🟢	🔴	🟢	🔴	🟡	🟢	🔴	🔴	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟡	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🟢	🟢	
Restrictive labour regulations (% of respondents)	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🟢	🔴
Business flexibility index (0-10 (high))	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	
Expense of government (% of GDP)	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴
Research & Development expenditure (% of GDP)	🟢	🟢	🟢	🔴	🟢	🟢	🔴	🟢	🔴	🔴	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🔴	
Tax revenue (% of GDP)	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🔴	🟡	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	
Social contributions (% of revenue)	🔴	🟢	🟢	🔴	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢	🔴	🔴	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🔴	
Impact of social transfers on poverty reduction (%)	🔴	🟢	🔴	🔴	🔴	🟢	🔴	🟢	🔴	🔴	🔴	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🟢	🔴	
Active labour market policy (LMP) expenditure (% of GDP)	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🟡	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	🔴	
Unemployment rate (% of active population)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🟡	🟢	🔴	🔴	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	
People at risk of poverty/social exclusion (% total population)	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🔴	🔴	🟢	🟢	🔴	🔴	🟢	🟢	🔴	🟢	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	

	BELGIUM	BULGARIA	CZECHIA	DENMARK	GERMANY	ESTONIA	IRELAND	GREECE	SPAIN	FRANCE	CROATIA	ITALY	CYPRUS	LATVIA	LITHUANIA	LUXEMBOURG	HUNGARY	MALTA	NETHERLANDS	AUSTRIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	SLOVAKIA	FINLAND	SWEDEN	
Severe material deprivation rate (% of total population)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Inequality of income distribution (income quintile share ratio)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Gini coefficient (0-100 (perfect inequality))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Labour productivity (% change on previous period)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
III. FORMAL INSTITUTIONAL POWERLESSNESS																												
Reliability of police services (1-7 (best))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Judicial independence (1-7 (best))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Rule of law (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Regulatory quality (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Voice and accountability (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Trust in Government (% tend to trust)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Trust in Parliament (% tend to trust)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY																												
Democracy Index (0-10 (full democracy))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Political stability (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
B. INFORMAL INSTITUTIONS																												
Social capital (0-100 (high))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Tax compliance (0-10 (high))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Acceptability of undeclared work (% totally 'unacceptable')^A)																												
Firm hires worker on undeclared basis	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Undeclared work by firm for firm	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Undeclared work by individual for private household	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Undeclared work by firm for private household	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Someone partially or completely conceals their income	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Personally know people engaged in undeclared work (% 'yes')^A)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

**TREND** (2009 vs. 2018; <sup>A)</sup> 2013 vs. 2019):

■ = positive

■ = unchanged

■ = negative

**Table 2. Early warning signals: trends (2018 compared with 2016)**

	BELGIUM	BULGARIA	CZECHIA	DENMARK	GERMANY	ESTONIA	IRELAND	GREECE	SPAIN	FRANCE	CROATIA	ITALY	CYPRUS	LATVIA	LITHUANIA	LUXEMBOURG	HUNGARY	MALTA	NETHERLANDS	AUSTRIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	SLOVAKIA	FINLAND	SWEDEN
<b>A. FORMAL INSTITUTIONS</b>																											
<b>I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES</b>																											
<b>1. Level of modernisation of government</b>																											
Government effectiveness (-2.5 to 2.5 (strong performance))	Red	Grey	Red	Grey	Red	Green	Grey	Green	Red	Grey	Grey	Red	Red	Grey	Grey	Grey	Grey	Grey	Green	Red	Grey	Grey	Red	Grey	Red	Green	Grey
<b>2. Formal institutions acting in a corrupt manner</b>																											
Corruption Perceptions Index (CPI) (0-100 (very clean))	Red	Grey	Green	Red	Red	Green	Grey	Grey	Grey	Green	Red	Green	Green	Green	Yellow	Grey	Grey	Grey	Red	Green	Red	Green	Red	Red	Red	Red	Grey
Control of corruption (-2.5 to 2.5 (strong performance))	Grey	Green	Grey	Red	Green	Grey	Red	Grey	Grey	Grey	Red	Green	Red	Grey	Red	Grey	Red	Grey	Grey	Grey	Red	Red	Red	Grey	Grey	Red	Red
<b>II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES</b>																											
<b>1. Modernisation Explanation - Level of 'development'</b>																											
GDP (current prices, euro per capita)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey
Human Development Index (HDI) (0-1 (highest development))	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Social Progress Index (SPI) (0-100 (high))	Green	Green	Grey	Grey	Green	Green	Green	Grey	Grey	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey	Grey	Grey	Green	Grey	Grey	Grey	Grey	Grey
Self-employment (% of total employment)	Green	Green	Grey	Green	Green	Red	Green	Green	Green	Grey	Green	Green	Grey	Green	Green	Green	Grey	Grey	Yellow	Green	Grey	Green	Green	Red	Green	Green	Green
<b>2. State intervention</b>																											
Burden of government regulation (1-7 (best))	Red	Grey	Grey	Green	Green	Red	Red	Red	Red	Grey	Red	Green	Red	Grey	Red	Red	Green	Green	Green	Red	Green	Green	Grey	Red	Green	Grey	Green
Restrictive labour regulations (% of respondents)	Red	Red	Grey	Grey	Red	Grey	Grey	Red	Grey	Grey	Red	Grey	Green	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Red	Green	Red	Grey	Red	Grey	Red
Business flexibility index (0-10 (high))	Green	Green	Grey	Grey	Green	Yellow	Red	Green	Green	Grey	Grey	Green	Green	Grey	Green	Grey	Red	Green	Green	Grey	Red	Grey	Red	Grey	Green	Green	Red
Expense of government (% of GDP)	Red	Red	Red	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red	Grey	Red	Grey	Grey	Red	Red	Red	Grey	Grey	Red	Red	Red	Red	Red
Research & Development expenditure (% of GDP)	Green	Grey	Green	Red	Green	Green	Grey	Green	Green	Red	Green	Green	Green	Green	Grey	Grey	Green	Grey	Grey	Grey	Green	Green	Green	Grey	Grey	Green	Grey
Tax revenue (% of GDP)	Grey	Grey	Green	Grey	Grey	Grey	Red	Grey	Red	Grey	Green	Grey	Grey	Grey	Grey	Grey	Red	Green	Green	Red	Green	Grey	Red	Grey	Green	Green	Green
Social contributions (% of revenue)	Grey	Green	Green	Red	Green	Green	Grey	Grey	Red	Grey	Red	Grey	Green	Grey	Green	Green	Grey	Grey	Grey	Green	Grey	Green	Green	Green	Green	Red	Red
Impact of social transfers on poverty reduction (%)	Red	Green	Grey	Red	Grey	Grey	Grey	Grey	Red	Grey	Grey	Grey	Green	Grey	Grey	Red	Green	Grey	Red	Grey	Green	Grey	Grey	Grey	Grey	Red	Grey
Labour market policy (LMP) expenditure (% of GDP)	Red	Red	Red	Red	Red	Green	Red	Red	Red	Grey	Grey	Red	Red	Red	Green	Red	Grey	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Unemployment rate (% of active population)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
People at risk of poverty/social exclusion (% total population)	Green	Green	Green	Red	Green	Grey	Green	Green	Green	Grey	Green	Green	Green	Grey	Green	Red	Green	Green	Grey	Grey	Green	Green	Green	Green	Green	Grey	Grey

	BELGIUM	BULGARIA	CZECHIA	DENMARK	GERMANY	ESTONIA	IRELAND	GREECE	SPAIN	FRANCE	CROATIA	ITALY	CYPRUS	LATVIA	LITHUANIA	LUXEMBOURG	HUNGARY	MALTA	NETHERLANDS	AUSTRIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	SLOVAKIA	FINLAND	SWEDEN
Severe material deprivation rate (% of total population)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Inequality of income distribution (income quintile share ratio)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Gini coefficient (0-100 (perfect inequality))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Labour productivity (% change on previous period)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
III. FORMAL INSTITUTIONAL POWERLESSNESS																											
Reliability of police services (1-7 (best))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Judicial independence (1-7 (best))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Rule of law (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Regulatory quality (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Voice and accountability (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Trust in Government (% tend to trust)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Trust in Parliament (% tend to trust)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY																											
Democracy Index (0-10 (full democracy))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Political stability (-2.5 to 2.5 (strong performance))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B. INFORMAL INSTITUTIONS																											
Social capital (0-100 (high))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Tax compliance (0-10 (high))	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

**TREND (2016-2018):**

■ = positive   ■ = unchanged   ■ = negative   ■ = inconclusive

## PART II: ASSESSING TRENDS IN UNDECLARED WORK IN ENFORCEMENT AUTHORITIES AND EARLY INTERVENTIONS

### 6 ASSESSING TRENDS IN UNDECLARED WORK IN ENFORCEMENT AUTHORITIES: EARLY WARNING SIGNALS

Part I of this report investigated some key structural conditions that **policy makers** can use as early warning signals. Part II now turns to how **enforcement authorities** can use various tools at their disposal to provide early warning signals of the potential growth of different types of undeclared work.

Previous reports of the European Platform tackling undeclared work focused upon how both data mining as well as risk assessment can be used to identify individual 'risky' businesses.<sup>3</sup> Here, another use of data mining and risk assessment is highlighted. This section reveals how databases (e.g., inspection results, registers of employment) can be used to analyse data in aggregate to identify trends, and early warning signals, of where undeclared work may be potentially growing (e.g., in which sectors, localities, occupations, firm types). Therefore, this section moves beyond the previous Platform discussions of using risk assessment to identify individual risky businesses and shows how the same methods and data can be used to identify risky sectors, risky occupations, risky geographical localities, etc.

**Three types of database** can be used to provide early warning signals:

- Inspection registers/case management databases;
- Enforcement authority databases (e.g. employment registers, tax return data, social insurance datasets); and
- Surveys of undeclared work, including cross-national comparative surveys.

**Records of inspections and their outcomes** (i.e., inspection registers or case management databases) can be used to compare year-on-year the violations found in different localities, sectors, occupations, firm sizes, etc. This aggregate-level analysis of the results of inspections can provide valuable data on whether the detection of violations (or some specific type of violation) is becoming more common over time in specific sectors, occupations, localities, and less common in others, so that patterns can be deciphered of the trends. This provides an early warning signal of where resources need to be concentrated in the immediate future.

**Enforcement authority databases** such as employment registers, tax return data, social insurance datasets, can also be analysed (either individually or by combining them) to identify predictive trends. To do so, and as will be highlighted below, the same indicators / red flags and risk assessment methods can be used when analysing the data in aggregate as when seeking to identify individual 'risky' businesses.

Third and finally, **surveys of undeclared work**, especially if regularly conducted over time, can be used to identify patterns in undeclared work and provide early warning Eurobarometer surveys on undeclared work conducted in 2007, 2013 and 2019.

Using these three types of database is a **pragmatic approach** towards horizon scanning. It is based on the data available in enforcement authorities and uses current indicators to identify individual 'risky' businesses at an aggregate level to identify trends and provide early warning signals. Despite the adoption of a pragmatic approach in this report, the importance of developing a more **strategic approach** should not be ignored. Enforcement authorities need to start from the type of undeclared work that they seek to

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<sup>3</sup> See: Stefanov, R., Mineva, D., Karaboev, S. (2018). *Toolkit on Risk Assessments for more efficient inspections as means to tackle undeclared work*. Brussels: European Platform tackling undeclared work.

tackle (e.g., unregistered employment, envelope wages, bogus self-employment), and then identify the specific data required to identify it, and the possible sources of such information/data, and how it can be acquired.

Moreover, just because the risk assessment process uses a linear extrapolation of the past to provide early warning signals of the future does not mean that such a linear view of the future is the only option. The future is not always a linear extrapolation of the past. There is a need in the future to develop more sophisticated forecasting methods and techniques, such as 'future basing' and scenario-building. There is also a need for simulations, experimental laboratory studies of different scenarios and behavioural analyses.

### Examples of more sophisticated forecasting methods

**Future basing** – participants create some ideal situation at some chosen point in time in the future (e.g., 20 years in the future), develop in detail what that future world looks like, as if it is already real, and then systematically remembering back what they did to achieve that world. They therefore remember the detailed operational plan they created to move from the situation in 2020/21 to the current ideal world they now inhabit in 2040. The outcomes are then used to inform present-day strategy. Such a future basing exercise would be best organised as a 2 or 3 day Platform event.

**Scenario building** - can be described as creating a story of the future based on an analysis and understanding of current and historic trends and events. The development of sets of narrative future scenarios then enables them to engage in scenario planning.

**Scenario planning**, also called scenario thinking or scenario analysis, is a strategic planning method that some organizations use to make flexible long-term plans. It is a creative process, much like writing a novel, with a plot beginning with the current reality. The objective is to create a variety of plausible futures (scenario building) and then to analyse what the organisation would need to do to succeed under each of them. It is generally used to assess the risk associated with a key decision being considered.

**Behavioural laboratory experiments and simulations** – these have been used extensively by economic psychologists in relation to tackling undeclared work, especially tax compliance, to evaluate how participants will respond when certain new policy initiatives are introduced (e.g., higher penalties, a greater risk of detection, being told by information campaigns that there is a high rate of compliance in their industry or locality).

#### Further reading:

<http://www.foresight-platform.eu/community/forlearn/how-to-do-foresight/methods/scenario/>

[https://en.wikipedia.org/wiki/Scenario\\_planning](https://en.wikipedia.org/wiki/Scenario_planning)

[https://ec.europa.eu/taxation\\_customs/sites/taxation/files/docs/body/taxation\\_paper\\_41.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/docs/body/taxation_paper_41.pdf)

<https://ore.exeter.ac.uk/repository/bitstream/handle/10871/33035/JOTA-TEGreview-Malezieux.pdf?sequence=1&isAllowed=y>

Here, however, a pragmatic approach is adopted using the three types of database available and the current risk assessment indicators to analyse the data in aggregate, and to extrapolate linear trends.

## 6.1 Unregistered employment

To provide early warning signals of where unregistered employment is growing, three datasets can be used: inspection registers / case management databases; enforcement authority databases (e.g. employment registers, tax return data, social insurance datasets), and surveys of undeclared work, including cross-national comparative surveys.

### 6.1.1 Records of inspections

Table 3 reports the records of inspections in an anonymous labour inspectorate to show how records of inspections and their outcomes can be used to provide early warning signals. This sets out the number of inspections conducted between 2016 and 2019 and the proportion of these inspections which identified work without a labour contract in the localities and sectors identifying the highest level of violations.

At the national aggregate level, the number of identified cases of working without a labour contract show no clear signs of either growing or declining over this four-year period. However, examining the trends across the sectors and localities, some early warning signals start to become apparent.

For example, between 2016 and 2019, the proportion of all inspections conducted in the restaurant sector steadily increased from 10.5 % to 15.2 % of all inspections. This increase was rational because the number of detected instances of working without contract per inspection was higher in the restaurant sector. In 2018, although 13.4 % of inspections were conducted in the restaurant sector, 19.6 % of all identified instances of working without a labour contract were in this sector.

Similarly, between 2016 and 2019, the proportion of all inspections conducted in the buildings construction sector steadily increased from 5.4 % to 9.6 % of all inspections. This increase was again rational because the number of detected instances of working without a contract per inspection was higher in buildings construction. In 2018, although 5.4 % of inspections were conducted in the buildings construction sector, 9.5 % of all identified instances of working without a labour contract and in 2019, 9.6 % of inspections were in this sector but 17.8 % of identified instances of working without a labour contract.

This signals the need for more resources to be devoted to the restaurant and construction sector. Concomitantly, it also displays the need for perhaps less resources to be allocated to the retail trade. This sector received 18.7 % of all inspections in 2016 and 14.0 % in 2019, but only 11.7 % and 6.7 % of instances of working without a labour contract. Before committing less resources, however, analysis is required of whether other types of undeclared work are more prevalent in this sector before such a decision is taken.

Similarly, when examining localities, the finding is that in locality 1, despite the proportion of inspections remaining constant at around 6.1 % of all national inspections, the proportion of all instances of working without a labour contract increased from 7.8 %, to 11.8 % to 13.2 % in 2016, 2017 and 2018 respectively. Based on this indicator alone, therefore, it suggests that greater resources should be devoted to locality 1. Similarly, despite the proportion of all national inspections increasing in locality 2 (8.9 %, 9.8 % and 10.3 % in 2016, 2017 and 2018 respectively), the proportion of the national instances of identified work without a labour contract declined (14.1 %, 13.2 % and 10.0 % in 2016, 2017 and 2018), intimating the need for a decline in resources, if only this indicator is considered.



**Table 3. Number of inspections and identified instances of unregistered work in an anonymous labour inspectorate, by sector and locality, 2016-2019**

	2016		2017		2018		2019 (first 6 months)	
	No.	%	No.	%	No.	%	No.	%
<b>Inspections</b>								
All	48 053	100	45 645	100	43 958	100	20 548	100
SECTOR								
Restaurants	5 035	10.5	5 459	12.0	5 914	13.4	3 131	15.2
Construction	2 595	5.4	3 231	7.1	3 266	7.4	1 983	9.6
Retail trade (exc. motor vehicles)	9 002	18.7	8 415	18.4	7 342	16.7	2 869	14.0
Crop & animal production	3 911	8.1	5 028	11.0	5 141	11.7	2 473	12.0
Specialised construction	1 497	3.1	1 513	3.3	1 611	3.7	871	4.2
Food manufacture	1 842	3.8	1 785	3.9	1 566	3.6	700	3.4
LOCALITY								
Locality 1	2 935	6.1	2 839	6.2	2 663	6.1	1 279	6.2
Locality 2	4 253	8.9	4 477	9.8	4 541	10.3	1 980	9.6
Locality 3	2 765	5.7	2 388	5.2	2 285	5.2	966	4.7
Locality 4	2 353	4.9	2 239	4.9	2 179	4.9	1 059	5.1
Locality 5	3 479	7.2	3 337	7.3	2 586	5.9	1 283	6.2
Locality 6	2 814	5.9	2 887	6.3	2 942	6.7	1 455	7.1
Locality 7	2 620	5.4	2 560	5.6	2 452	5.6	1 380	6.7
<b>Violations</b>								
<i>Work without a labour contract</i>								
All	3 132	100	3 149	100	2 505	100	1 496	100
SECTOR								
Restaurants	590	18.8	550	17.5	492	19.6	248	16.6
Building construction	298	9.5	575	18.3	340	13.5	267	17.8
Retail trade (exc. motor vehicles)	366	11.7	289	9.2	234	9.3	100	6.7
Crop & animal production	242	7.7	204	6.5	177	7.1	102	6.8
Specialised construction	131	4.2	240	7.6	154	6.1	151	10.0
Food manufacture	114	3.6	141	4.5	113	4.5	47	3.1
LOCALITY								
Locality 1	244	7.8	356	11.3	330	13.2	122	8.2
Locality 2	443	14.1	418	13.2	251	10.0	129	8.6
Locality 3	161	5.1	226	7.2	206	8.2	104	6.9
Locality 4	160	5.1	149	4.7	198	7.9	86	5.7
Locality 5	271	8.6	240	7.6	194	7.7	108	7.2
Locality 6	223	7.1	212	6.7	154	6.1	99	6.6
Locality 7	220	7.0	185	5.9	150	6.0	72	4.8

*Source: authors' analysis of data from an anonymous labour inspectorate*

In sum, records of inspections, if analysed in aggregate, provide a useful predictive tool of where work without a labour contract is growing and where it is declining.

### 6.1.2 Enforcement authority databases

Besides using records of inspections to identify trends and provide early warning signals of where unregistered employment might be contracting and expanding, another data source is enforcement authority databases such as employment registers, tax return data and social insurance data, as well as their combined use.

Although the data available to enforcement authorities differs significantly across Member States, nearly all enforcement authorities have access to some such dataset either directly or indirectly. Indeed, many enforcement authorities are pursuing bilateral and multilateral agreements with other enforcement authorities to exchange and share data with each other.

When analysing these datasets in aggregate to identify trends and provide early warning signals, the same indicators used to identify individual 'risky' businesses can be used. A non-exhaustive list of the indicators/red flags that might be used to indicate a growth in unregistered employment include:

- Turnover and number of employees mismatch;
- Past infringements, fines, penalties;
- Newly established companies;
- Companies in high risk sectors (e.g. construction);
- Firms/sectors cited in the received complaints/signals; and
- Firms/sectors identified as risky by inspectors and other authorities 'on the ground'.

In Belgium, for instance, the Social Inspection Services Anti-Fraud Organization (OASIS) monitors business and employee data (e.g. turnover, number of employees, registered personnel, wage levels) and can use this to identify specific trends (e.g. increasing turnover with decreasing number of employees; reduction of registered staff above a certain threshold; large differences in total wage sums and numbers of employees).

### 6.1.3 Surveys

Third and finally, **surveys of undeclared work**, especially those regularly conducted over time, can be used to identify patterns in unregistered employment and provide early warning signals of where it might be growing and declining. The two main cross-national surveys available are the special Eurobarometer survey on undeclared work conducted in 2007, 2013 and 2019 and the European Working Conditions Survey (EWCS) conducted in 2005, 2010 and 2015. Longitudinal data on unregistered employment from the Eurobarometer surveys is provided in the forthcoming Platform report on the 2019 Eurobarometer survey (see Williams and Horodnic, forthcoming). Here, the results of the distribution of unregistered employment in the 2015 EWCS across countries and sectors is reported.

Table 4 reveals that unregistered employment is not evenly distributed. The proportion of employees with no contract or terms of employment varies from 36 % in Cyprus, 23 % in Malta and 16 % in Greece at the upper end, to 1 % in Luxembourg and Sweden at the lower end. These cross-national differences in the proportion of employees in unregistered employment are statistically significant.

**Table 4. Cross-national variations in the prevalence of unregistered employment: by sector**

Country	Working with no contract*	Working with no contract:			
		Agriculture	Industry	Construction	All services
	(%)	(%)	(%)	(%)	(%)
Cyprus	36	32	46	42	34
Malta	23	6	22	14	24
Greece	16	22	9	17	16
Ireland	11	8	11	20	11
Italy	9	18	1	7	10
Poland	9	33	4	15	7
Portugal	9	6	2	24	9
Austria	7	18	4	11	7
Latvia	7	24	1	3	7
Romania	5	9	1	5	5
Spain	5	6	2	9	5
Bulgaria	4	23	0	19	3
Croatia	4	9	3	9	4
Finland	4	12	1	4	4
Hungary	4	9	1	9	3
Slovenia	4	21	1	13	3
Czech Republic	3	6	0	5	3
Denmark	3	16	2	2	3
Germany	3	17	1	2	4
Netherlands	3	19	0	4	3
Norway	3	15	1	2	3
Belgium	2	13	1	1	2
Estonia	2	5	0	5	2
France	2	3	0	3	2
Lithuania	2	6	1	1	2
Slovakia	2	3	1	5	2
Luxembourg	1	20	0	0	1
Sweden	1	0	0	1	1

Note: \* Chi-square test of independence between unregistered employment participation and country,  $\chi^2(24) = 3557.3$ ,  $p < 0.01$ .

Source: abridged from Williams and Horodnic, 2018

Table 5 reveals that the vast majority of those in unregistered employment (70.8 %) are working in the service industries. As such, although 14 % in agriculture are in unregistered employment and 10 % in the construction sector, these constitute just 10.8 % and 7.9 % respectively of those working without a written contract or terms of employment.

**Table 5. Prevalence of unregistered employment in Europe: by economic sector**

	Working with no written contract	% of all employees with no written contract	% of all employees
	(%)	(%)	(%)
<i>TOTAL</i>	7	100	100
<i>Agriculture</i>	14	10.8	5.9
<i>Industry</i>	5	10.5	15.7
<i>Construction</i>	10	7.9	5.6
<i>All services</i>	7	70.8	72.8
<i>All services</i>	7	100	100
<i>Commerce and hospitality</i>			
▪ Wholesale and retail trade; repair of motor vehicles and motorcycles	5	14.3	19.7
▪ Accommodation and food service activities	15	14.7	6.9
<i>Transport</i>			
▪ Transportation and storage	4	4.2	6.8
<i>Financial services</i>			
▪ Financial and insurance activities	2	1.0	4.3
▪ Real estate activities	2	0.3	1.2
<i>Public administration and Health</i>			
▪ Public administration and defence; compulsory social security	6	6.5	7.9
▪ Human health and social work activities	5	11.1	15.2
<i>Education</i>			
▪ Education	5	7.8	11.3
<i>Other services</i>			
▪ Information and communication	2	1.1	3.1
▪ Professional, scientific and technical activities	4	3.0	5.7
▪ Administrative and support service activities	8	9.5	8.4
▪ Arts, entertainment and recreation	11	3.9	2.4
▪ Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	43	12.9	2.3
▪ Activities of extraterritorial organisations and bodies	12	0.2	0.1
▪ Other service activities	14	9.5	4.7

*Note: data based on analysing 35 European countries*

*Source: Williams and Horodnic, 2018*

Unregistered employment, however, is not evenly distributed across the service industries. Analysing which service industries have a higher prevalence of unregistered employment, Table 5 reveals that 43 % of all service workers in the household services sector (e.g., domestic cleaners) do not have a written contract or terms of employment, and 15 % of employees in the accommodation and food service industries. In consequence, although employees in the household services sector constitute just 2.3 % of all service industry employees, 12.9 % of all unregistered employment in the service industries is in this sphere. Similarly, although the accommodation and food service industries employ just 6.9 % of all employees, 14.3 % of all unregistered employees in the service industries are in this realm. Other service industries, however, have relatively low levels of unregistered employment, namely financial and insurance services, real estate services, and information and communication services where just 2 % of all employment is unregistered.

This single EWCS survey, therefore, provides an early warning signal of where action is required by enforcement authorities. An analysis of the 2005 and 2010 results would provide further data on whether unregistered employment is becoming increasingly concentrated over time in specific countries and sectors, and thus reinforce the case for action in these areas.

## **6.2 Under-declared employment**

To provide early warning signals of where under-declared employment is growing, the same three types of dataset can be used: inspection registers / case management databases; enforcement authority databases (e.g. employment registers, tax return data, social insurance datasets), and surveys of undeclared work, including cross-national comparative surveys.

### **6.2.1 Records of inspections**

Table 6 reports the records of inspections in an anonymous labour inspectorate to show how records of inspections and their outcomes can be used to provide early warning signals. This sets out the number of inspections conducted between 2016 and 2019 and the proportion of these inspections which identified infringements in working hours in the localities and sectors identifying the highest level of violations.

At the national aggregate level, the number of identified infringements related to working hours show no clear signs of either growing or declining over this four-year period. However, examining the trends across the sectors and localities, some early warning signals start to become apparent.

For example, between 2016 and 2019, the proportion of all inspections conducted in the restaurant sector steadily increased from 10.5 % to 15.2 % of all inspections. This increase was a rational decision because the number of detected instances of infringements related to working hours per inspection was higher in restaurant sector. In 2018, although 13.4 % of inspections were conducted in the restaurant sector, 19.6 % of all identified instances of working without a labour contract, 25.7 % of all infringements related to working hours and 14.3 % of infringements related to labour remuneration were in this sector (see Table 6 and Table 7).

Similarly, when examining localities, the finding is that in locality 3, despite the proportion of inspections remaining constant at around 6.1 % of all national inspections, the proportion of all instances of working without a labour contract increased from 7.8 %, to 11.8 % to 13.2 % in 2016, 2017 and 2018 respectively. Based on this indicator alone, therefore, it suggests that greater resources should be devoted to locality 3. So too did the proportion of all infringements related to working hours increase in locality 3 from 6.7 % through 7.7 % to 8.9 % over the 2016 to 2018 period, whilst the proportion of all infringements related to labour remuneration that were in locality 3 remained constant. This therefore indicates that locality 3 should receive more resource.

**Table 6. Number of inspections and detection of infringements related to working hours in an anonymous labour inspectorate, selected sectors and localities, 2016-2019**

	2016		2017		2018		2019 (first 6 months)	
	No.	%	No.	%	No.	%	No.	%
<b>Inspections</b>								
All	48 053	100	45 645	100	43 958	100	20 548	100
SECTOR								
Retail trade (except motors)	9 002	18.7	8 415	18.4	7 342	16.7	2 869	14.0
Accommodation	827	1.7	1 068	2.3	1 262	2.9	634	3.1
Restaurants	5 035	10.5	5 459	12.0	5 914	13.4	3 131	15.2
Crop and animal production	3 911	8.1	5 028	11.0	5 141	11.7	2 473	12.0
Land transport	1 872	3.9	1 676	3.7	1 523	3.5	716	3.5
Food manufacture	1 842	3.8	1 785	3.9	1 566	3.6	700	3.4
Security & investigation services	753	1.6	738	1.6	633	1.4	249	1.2
LOCALITY								
Locality 1	4 253	8.9	4 477	9.8	4 541	10.3	1 980	9.6
Locality 2	3 479	7.2	3 337	7.3	2 586	5.9	1 283	6.2
Locality 3	2 935	6.1	2 839	6.2	2 663	6.1	1 279	6.2
Locality 4	2 814	5.9	2 887	6.3	2 942	6.7	1 455	7.1
Locality 5	1 340	2.8	1 358	3.0	1 397	3.2	611	3.0
Locality 6	2 765	5.7	2 388	5.2	2 285	5.2	966	4.7
Locality 7	2 620	5.4	2 560	5.6	2 452	5.6	1 380	6.7
<b>Violations</b>								
<i>Infringements related to working hours</i>								
All	12 353	100	11 176	100	12 635	100	5 982	100
SECTOR								
Retail trade (except motors)	2 964	24.0	2 764	24.7	3 294	26.1	1 314	22.0
Accommodation	321	2.6	427	3.8	622	4.9	297	5.0
Restaurants	2 378	19.3	2 507	22.4	3 250	25.7	1 715	28.7
Crop and animal production	430	3.5	497	4.5	565	4.5	224	3.7
Land transport	916	7.4	704	6.3	539	4.2	284	4.7
Food manufacture	512	4.1	437	3.9	487	3.8	203	3.4
Security & investigation services	399	3.2	329	2.9	398	3.1	151	2.5
LOCALITY								
Locality 1	1 576	12.7	1 481	13.3	2 037	16.1	743	12.4
Locality 2	1 183	9.6	1 320	11.8	1 187	9.4	804	13.4
Locality 3	833	6.7	861	7.7	1 134	8.9	478	8.0
Locality 4	592	4.8	480	4.3	569	4.5	222	3.7
Locality 5	367	3.0	348	3.1	557	4.4	179	3.0
Locality 6	428	3.5	486	4.3	536	4.2	202	3.4
Locality 7	685	5.5	523	4.7	495	3.9	318	5.3

*Source: authors' analysis of data from an anonymous labour inspectorate*

**Table 7. Number of inspections and detection of infringements related to labour remuneration in an anonymous labour inspectorate, selected sectors and localities, 2016-2019**

	2016		2017		2018		2019 (first 6 months)	
	No.	%	No.	%	No.	%	No.	%
<b>Inspections</b>								
All	48 053	100	45 645	100	43 958	100	20 548	100
SECTORS								
Retail trade (exc. motors)	9 002	18.7	8 415	18.4	7 342	16.7	2 869	14.0
Restaurants	5 035	10.5	5 459	12.0	5 914	13.4	3 131	15.2
Mining of metal ores								
Crop and animal production	3 911	8.1	5 028	11.0	5 141	11.7	2 473	12.0
Security & investigation services	753	1.6	738	1.6	633	1.4	249	1.2
Land transport	1 872	3.9	1 676	3.7	1 523	3.5	716	3.5
LOCALITY								
Locality 1	4 253	8.9	4 477	9.8	4 541	10.3	1 980	9.6
Locality 2	1 425	3.0	1 229	2.7	1 366	3.1	583	2.8
Locality 3	3 479	7.2	3 337	7.3	2 586	5.9	1 283	6.2
Locality 4	2 620	5.4	2 560	5.6	2 452	5.6	1 380	6.7
Locality 5	2 765	5.7	2 388	5.2	2 285	5.2	966	4.7
Locality 6	2 353	4.9	2 239	4.9	2 179	4.9	1 059	5.1
Locality 7	2 935	6.1	2 839	6.2	2 663	6.1	1 279	6.2
<b>Violations</b>								
<i>Infringements related to labour remuneration</i>								
All	33 315	100	22 012	100	21 356	100	11 845	100
SECTORS								
Retail trade (exc. motors)	4 799	14.4	4 341	19.7	3 713	17.4	1 863	15.7
Restaurants	2 545	7.6	2 947	13.4	3 054	14.3	1 771	14.9
Mining of metal ores	3	Neg.	422	1.9	1 250	5.8	155	1.3
Crop and animal production	847	2.5	1 223	5.5	1 238	5.8	586	4.9
Security & investigation services	1 171	3.5	928	4.2	1 030	4.8	399	3.4
Land transport	1 791	5.4	1 221	5.5	1 004	4.7	587	5.0
LOCALITY								
Locality 1	4 283	12.9	3 494	15.9	2 958	13.8	1 717	14.5
Locality 2	1 253	3.8	881	4.0	1 977	9.2	329	2.8
Locality 3	3 194	9.6	1 757	8.0	1 468	6.9	640	5.4
Locality 4	2 586	7.8	1 167	5.3	1 320	6.2	1 009	8.5
Locality 5	1 680	5.0	1 108	5.0	1 149	5.4	831	7.0
Locality 6	1 485	4.5	1 018	4.6	1 081	5.1	486	4.1
Locality 7	2 655	7.9	1 660	7.5	1 055	4.9	600	5.0

*Source: authors' analysis of data from an anonymous labour inspectorate*

In sum, records of inspections, if analysed in aggregate, provide a useful predictive tool of where various types of under-declared employment is growing and where it is declining.

### 6.2.2 Enforcement authority databases

Enforcement authority databases are another source of information for identifying trends and providing early warning signals of where under-declared employment might be contracting and expanding, such as employment registers, tax return data and social insurance data, as well as their combined use.

When analysing these datasets in aggregate to identify trends and provide early warning signals, the same indicators used to identify individual 'risky' businesses can be used. A non-exhaustive list of the indicators / red flags that might be used to indicate a growth in under-declared employment include:

- Below average salary for the sector/profession;
- High proportion of workers paid minimum salaries;
- 25-50% are part-time employees;
- Part-time contracts are less than 4 hours/week;
- High number of short-time contracts;
- Past infringements, fines, penalties;
- Firms/sectors cited in the received complaints/signals; and
- Firms/sectors identified as risky by inspectors and other authorities 'on the ground'.

An example of where such a database has been used to predict trends is Greece where the Hellenic Labour Inspectorate (SEPE) uses data mining of employment in real time from the ERGANI OP.S. database to identify under-declared employment. 'Red flags' used to identify under-declared employment include businesses with a:

- High percentage recruiting and redundancies within 2-5 days in relation to the total number of employees (>20%);
- High percentage of labour disputes in relation to the total number employees (>20%);
- High percentage of employees with less than 20 hours/week (>30%);
- High percentage of altering employment contracts, from full-employment to part time, within the last semester (>30%);
- High percentage of schedule modifications of employees in relation to the total number of employees (>20%);
- High numbers of recruits and redundancies in relation to the total number employees, within the last semester (>40%);
- High percentage of foreign employees or posted workers (>50%); and
- High percentage of labour accidents in relation to the total number employees (>10%).

Or the business has:

- Never been inspected / was inspected a long time ago.

The finding in Greece is that under-declared employment occurs across all sectors of economic activity but is more prevalent in food-supply companies, cleaning and safekeeping services, banks, road transport, accommodation, retail, tourism and seasonal businesses.



### 6.2.3 Surveys

There are also **surveys of under-declared employment**, exemplified by the 2019 Eurobarometer special survey on undeclared work, that can be used to identify trends in under-declared employment, including who undertakes such under-declared employment, why they do so, and what type of work they undertake (e.g., sector, firm size, occupation).

Comparing the results of the 2007, 2013 and 2019 Eurobarometer surveys, the finding is that in 2007, 5.5 % of formal employees across the EU-27 received an additional undeclared ('envelope') wage from their employer in addition to their official declared salary, with the undeclared wage amounting to on average 43 % of their gross salary. The prevalence of under-declared employment, however, was lower in Western and Nordic nations than in Southern and East-Central Europe, as was the portion of the gross wage received as an envelope wage (Williams, 2009a, 2013). The 2013 and 2019 surveys, however, have witnessed a drop in under-declared employment to 3 % of all formal employees and that 25 % of their gross salary is paid as an envelope wage. Between 2013 and 2019, moreover the payment of an envelope wage for regular employment has markedly decreased and the proportion receiving an envelope wage for overtime, extra work has markedly increased. Few changes have taken place across Member States although there have been marked 4 percentage point declines in Latvia and Croatia in the level of under-declared employment.

## 6.3 Bogus self-employment

To provide early warning signals of where bogus self-employment is growing, the same three types of data can be used: inspection registers / case management databases; enforcement authority databases (e.g. employment registers, tax return data, social insurance datasets), and surveys of undeclared work, including cross-national comparative surveys.

### 6.3.1 Records of inspections

Records of inspections and their outcomes provide very useful early warning signals about where bogus self-employment is growing. In future, therefore, enforcement authorities should analyse in aggregate their records of inspections to identify where bogus self-employment has been found and how this is changing over time, to provide early warning signals of where it might be growing.

### 6.3.2 Enforcement authority databases

Enforcement authority databases are another source of information for identifying trends and providing early warning signals of where bogus self-employment might be contracting and expanding, such as employment registers, tax return data and social insurance data, as well as their combined use.

The 2019 annual Platform survey reveals that few Member States have well-developed risk assessment systems that are used to interrogate databases to identify potential instances of bogus self-employment. Just under half (43 %) of country responses indicated that their competent authorities apply risk assessment to identify bogus self-employment. In Southern European countries this is more commonly applied (60 % indicated risk assessments are being used). In Spain, there has been some data crossing (SS Treasury and Tax Agency) to detect cases of bogus self-employment. In Portugal, meanwhile, economic dependence is assumed if more than 80 % of the income of a self-employed person derives from a single entity. This suggests a need for Member States to consider more fully the criteria used in data mining to identify instances of bogus self-employment. So far as is reported by Member States to the 2019 annual Platform survey, this currently appears to be very undeveloped.

When analysing these datasets in aggregate to identify trends and provide early warning signals, a non-exhaustive list of the indicators/red flags that might be used to indicate a growth in bogus self-employment include:

- Sudden changes from employees to self-employed (working for the same payer);
- Past infringements, fines, penalties;
- Newly established companies;
- Large number / quickly changing subcontractors;
- Large numbers of 'go-betweens' without license acting as temporary work agencies;
- High turnover of staff (more than 10 % per month); and mismatched with a low overall number of workers;
- Companies in high risk sectors (e.g. construction);
- Firms/sectors cited in the received complaints/signals; and
- Firms/sectors identified as risky by inspectors and other authorities 'on the ground'.

### 6.3.3 Survey

In 2015, the sixth EWCS interviewed almost 44 000 workers (both employees and self-employed people) in 35 European countries: the 28 EU Member States, the five EU candidate countries, and Norway and Switzerland (Eurofound, 2016). This 2015 survey includes the same questions, namely: (1) number of clients; (2) authority to hire and dismiss employees, and (3) decision-making autonomy. In 2015, 1.4 % of total employment in the EU-28 was pure dependent self-employment complying with fewer than two of these three criteria (compared with 1.3 % in 2010). However, an additional 2.9 % of total employment in the EU-28 was in a 'grey zone' comprising self-employed workers who comply with only two of the three criteria (compared with an additional 4.0 % in 2010 in the EU-27). The result is that in 2015, 4.3 % of total employment in the EU-28 can be classified as dependent self-employment comprised of self-employed workers who do not comply with one or more of these three criteria (compared with 5.3 % in 2010 in the EU27) (Williams and Lapeyre, 2017).

**Summary - three types of database which can be used to provide early warning signals**

	Unregistered employment	Under-declared employment	Bogus self-employment
<b>I. Records of inspections (inspection registers / case management databases)</b>	✓	✓	✓
<b>II. Enforcement authority databases (e.g. employment registers, tax return data, social insurance datasets)</b>	✓	✓	✓
<i>Indicators/red flags that might be used to indicate a growth in undeclared activities (non-exhaustive list):</i>			
– Turnover and number of employees mismatch	✓		
– Past infringements, fines, penalties	✓	✓	✓
– Newly established companies	✓		✓
– Companies in high risk sectors (e.g. construction)	✓		✓
– Firms/sectors cited in the received complaints/signals	✓	✓	✓
– Firms/sectors identified as risky by inspectors and other authorities 'on the ground'	✓	✓	✓
– Below average salary for the sector/profession		✓	
– High proportion of workers paid minimum salaries		✓	
– 25-50% are part-time employees		✓	
– Part-time contracts are less than 4 hours/week		✓	
– High number of short-time contracts		✓	
– Sudden changes from employees to self-employed (working for the same payer)			✓
– Large number / quickly changing subcontractors			✓
– Large numbers of 'go-betweens' without license acting as temporary work agencies			✓
– High turnover of staff (more than 10 % per month); and mismatched with a low overall number of workers			✓
<b>III. Surveys of undeclared work, including cross-national comparative surveys</b>	✓	✓	✓
<i>Eurobarometer surveys on undeclared work</i>			
– Special Eurobarometer No. 498 (2019)	✓	✓	✓
– Special Eurobarometer No. 402 (2013)	✓	✓	
– Special Eurobarometer No. 284 (2007)	✓	✓	
<i>European Working Conditions Surveys</i>			
– Sixth European Working Conditions Survey (2015)	✓		✓
– Fifth European Working Conditions survey (2010)	✓		✓
– Fourth European Working Conditions Survey (2005)	✓		

## 7 EARLY INTERVENTIONS BY ENFORCEMENT AUTHORITIES TO NEGATIVE SIGNALS

When enforcement authorities use the above databases and methods to produce early warning signals of where undeclared work is growing, early interventions are then required. The aim of this section is to provide **case studies** of the type of signal enforcement authorities have used when identifying the growth of different types of undeclared work or its growth in different industries or occupations, and to review and evaluate the early interventions taken in response to this negative signal.

Before considering the interventions used in response to early warning signals, it is first useful to highlight how some Member States have established units to engage in such horizon scanning, namely Norway (see Box 1), Spain (see Box 2) and Finland (see Box 3).

### **Box 1. Intelligence team, Directorate of Tax, Norway**

**Aim:** Since October 2015, a body has been established to understand dynamics in the labour market and its effects on combating undeclared work, so that better decisions can be made on targeting the prevention and combating of undeclared work.

**Description:** To analyse trends in the labour market and its consequences for compliance, to fulfil the strategic information needs of policy makers in the tax administration, some 4-5 full-time equivalent (FTE) staff are each year dedicated to this analytical function. These analysts are given access to data on tax non-compliance not normally available so that they can both analyse the level and character of non-compliance and developments over time.

This has enabled the authorities in Norway (primarily the tax authorities, but also others such as the labour inspectorate) to be more confident in making decisions to target its activities.

The analysts maintain a dialogue with the executives in the tax administration regarding their information needs and how to design the analysis assignments.

The intelligence team in the Directorate of Tax manages the plan for analyses and makes overall assessments of the knowledge gathered. Analysts in the tax administration and external analysts do the analyses. Use of internal resources is 4-5 full-time equivalent (FTE) per year. An example cost for an external analysis (these are carried out when information is needed) is EUR 52 000 and external surveys (conducted annually) cost approximately EUR 50 000.

#### **Evaluation of effectiveness of the early intervention:**

The practice has not yet been evaluated, but the output so far, is:

- Two analyses of data from audits;
- Three surveys;
- One external analysis of the scope of undeclared work; and
- Three overall assessments of undeclared work.

The outcome is:

- Awareness regarding what we know and what we need to learn more about;
- Awareness regarding how to present knowledge and decisions to make an impact on tactical and operational work; and
- Increased confidence in strategic decisions made to prevent and combat undeclared work.

Source: <https://ec.europa.eu/social/BlobServlet?docId=18699&langId=en>

### **Box 2. Anti-Fraud Tool Unit, Spain**

**Aim:** Since 2015, the Anti-Fraud Tool Unit has existed as a specific unit within the National Anti-Fraud Office. Its aim is to use data matching and data mining to create a comprehensive risk assessment system in the field of undeclared work and other social security infringements and to raise the efficiency of the investigations.

Specific objectives:

- The early detection of new fraud situations, taking into account that it increases the level of control actions needed;
- Adequate facilitation and management of the existing data in a number of institutions in a way that facilitates and improves the research activity by the

Labour and Social Security Inspectorate (ITSS);

- Define patterns of fraud in employment and social security, and design statistical models to detect it;
- Support the planning of the activity and the performance of the ITSS.

**Description:** The Unit has designed a statistical tool to predict fraud in employment and social security. Although this is currently primarily used to guide the Labour and Social Security Inspectorate (ITSS) to identify companies with a higher probability of engaging in undeclared work or carrying out other social security fraud, it can also be used for producing early warning signals.

The ITSS Central Services execute the statistical fraud models. This is carried out through two methods:

- 1) *Implementation of models based on 'business rules'*, designed by the team of Inspectors and sub-inspectors assigned to the Anti-fraud Tool Unit. The role of business rules is to identify potential fraud cases.
- 2) *Data mining*. Massive amounts of information from different sources, including Social Security and the Treasury, is analysed in order to unveil new fraud patterns which can serve to detect fraud cases and create new business rules. For the moment data mining has been mainly applied to the retail sector, to detect fictitious companies and bogus self-employment.

**Evaluation:** This is an ongoing project. Further improvements are expected as the tool is in a process of constant development. This is due to two reasons. First, the tool design includes feedback mechanisms to improve its performance. Second, the ITSS Master Plan for decent work 2018-2019-2020 and Strategic Plan 2018-2020 includes measures for further improvement, such as visualisation of fraud patterns, improving the matching of available data and harmonising the format of data from different public sources.

Source: <https://ec.europa.eu/social/BlobServlet?docId=20240&langId=en>

### Box 3. Grey Economy Information Unit, Finland

**Aim:** Established in January 2011, this specialist unit within the tax administration (in the Ministry of Finance) promotes the fight against the grey economy, including undeclared work, by producing and sharing information regarding the grey economy and its control. It produces general reports without identifying specific actors (under its task of information gathering and dissemination). The Unit gathers information and conducts investigations into undeclared work.

**Description:** Besides the 200 000 or so compliance reports it produces on individual businesses each year, it also produces around 100 classification reports identifying patterns and trends of interest to policy makers

The Grey Economy Information Unit is authorised to keep a database within the meaning of the Data Protection Directive (95/46/EC, 1995), containing information necessary for the preparation of reports. According to the Act on the Grey Economy Information Unit (1207/2010), all information which is no longer needed must be deleted. In the Act there are provisions on obtaining the information, archiving and deletion. The data controller is the tax administration. The advantage of this centralisation of data analysis is that many of the problems witnessed in other Member States related to the inter-operability of databases are overcome.

**Evaluation:** No known specific evaluation has been conducted of the usefulness of its classification reports in improving the effectiveness of policy making.

Source: <https://ec.europa.eu/social/BlobServlet?docId=22196&langId=en>

To display how a range of initiatives can and have been implemented in response to specific negative signals, we here analyse in turn firstly, unregistered employment, secondly, under-declared employment and thirdly, bogus self-employment.

### 7.1 Unregistered employment: policy responses to negative signals

To display how early warning signals of trends in unregistered employment have led to interventions, this section provides several case studies of the type of negative signal enforcement authorities have used to identify a growth in unregistered employment and outlines the early intervention undertaken in response to this negative signal.

Policy responses can take the form of either direct or indirect measures. Direct measures seek to ensure that it is beneficial to undertake declared work by either increasing the costs of undeclared work or the ease and benefits of engaging in declared work. Indirect measures, meanwhile, seek to improve the social contract between citizens, employers and the state. On the one hand, this is achieved either by changing the attitudes of citizens, workers and employers using education and awareness raising campaigns. On the other hand, it is achieved by modernising formal institutions to build trust.

Here, case studies are presented of where early warning signals have resulted in interventions.

#### **Case Study 1. Responding to recognition of the extensive use of undeclared work in the household services sector, Austria**

**Early warning signal:** According to the Federal Ministry of Economy, Family and Youth (Bundesministerium für Wirtschaft, Familie und Jugend, BMWFJ), formerly the BMWA, in 2006, only around 10 000 out of more than 150 000 household workers were legally employed. This provided a clear signal that intervention was required to transform undeclared work into declared work in this sector.

**Description of early intervention:** In order to legitimise work in the sector, in 2006, household service vouchers (Dienstleistungsscheck) were introduced to transform undeclared work into declared work and improve domestic workers' social protection. The household service vouchers are used by households to pay for personal and household services (i.e. childcare, gardening, cleaning etc.). This scheme legitimizes personal and household services, giving people working in households access to accident insurance and voluntary health and pension insurance.

**Evaluation of effectiveness of the early intervention:** Since its introduction in 2006, the number of household service vouchers purchased has increased from 59 820 to 337 328 in 2017, with the budget for the scheme increasing from EUR 872 427 to EUR 10 186 705 across the same period. Alongside this, the numbers of service users of the voucher scheme increased from 2 317 households in 2006 to 13 278 households in 2017 while the number of personal and household service (PHS) workers increased from 2 038 in 2006 to 10 881 workers in 2017.

According to VAEB, the household service vouchers led to a formalisation of 1.55 million working hours from 2006 to 2013, assuming an average hourly cost of EUR 11. The introduction of the household service voucher system has therefore contributed to formalising undeclared work in the household service sector.

Source: <https://ec.europa.eu/social/BlobServlet?docId=19930&langId=en>



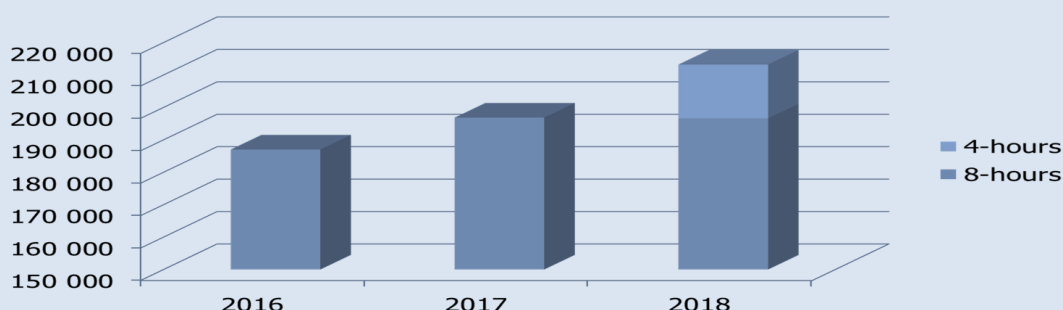
## Case Study 2. Responding to the extensive use of unregistered employment in short-term seasonal work in agriculture, Bulgaria

**Early warning signal:** Inspection records identified that in the agricultural sector, many were working without a labour contract. It was quickly established that many of these were short-term seasonal workers and that agricultural employers were commonly stating that this was happening due to the difficulties of employing short-term seasonal labour on a legitimate contract.

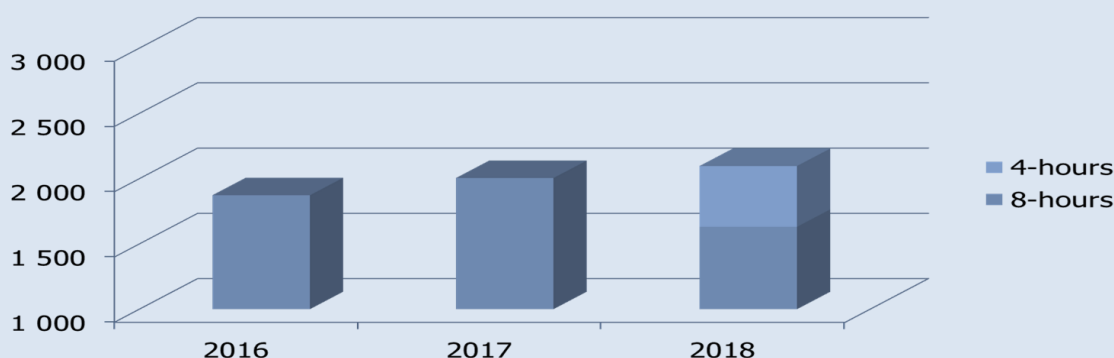
**Description of early intervention:** To prevent unregistered employment among short-seasonal agricultural workers, in 2015, an amendment to the Labour Code in Bulgaria was introduced - Employment Contracts for Short-term Seasonal Agricultural Work. This provides a legal tool for more easily hiring workers on a declared basis for short-term seasonal contract work. It assists anybody over 18 years old (including registered unemployed persons) to engage in legally regulated work, while guaranteeing a degree of social protection for these persons, since all taxes and social security contributions must be paid in advance.

Employers, who must be a registered farmer, who wish to hire a worker in this way, can access the necessary forms for this type of employment contract from the Labour Inspectorate by post, or via the internet since 2017. The advantage for unemployed persons in particular is that they can work on this type of labour contract without the need to end their registration as unemployed persons and for all other workers they can do so easily and with their taxes and social contributions paid in advance.

**Evaluation of effectiveness of the early intervention:** Following an awareness raising campaign, the measure became popular among farmers because it allows the recruitment of workers for short-term agricultural activity during the short season. Workers can work legally and their registration as unemployed is not affected despite short-time employment. As the graphic below shows, the number of single employment contracts issued has increased each year.



So too has the number of farmers who use these contracts increased.



Source: <https://ec.europa.eu/social/BlobServlet?docId=18610&langId=en>

### **Case Study 3. Responding to inspection records indicating the excuse of 'first day at work syndrome', Poland**

**Early warning signal:** An analysis of inspection records revealed that a high proportion of employers and employees caught working on an unregistered basis claimed at the inspection visit that it was their first day at work and that they had not yet registered.

**Description of early intervention:** It was thus considered necessary to undertake actions aimed at raising awareness among employees concerning employment law and among employers regarding their obligations. The National Awareness Raising Campaign, *Before you undertake work*, was carried out during 2013-15 using several methods of communication with selected target groups, including radio advertisements, publications, meetings seminars etc. It aimed to provide information on employment-related labour law provisions, with a focus on civil-law contracts, to people entering the labour market.

**Evaluation of effectiveness of the early intervention:** Quantitative evaluation of the National Awareness Raising Campaign, *Before you undertake work*, was carried out. In 2013-15, outputs included the following:

- Number of individuals reached by direct actions related to the campaign – 77 200;
- Number of training sessions carried out – 871;
- Number of seminars/conferences related to the campaign issues – 73;
- Number of stalls and enquiry points – 826; and
- Number of publications associated with the campaign handed out – 332 000.

The percentage of the target group reached by the radio campaign was monitored with the use of Millward Brown Radio Track research (concerning people who had heard at least three campaign advertisements on the radio). The results were as follows:

- 2013: 52.6 %;
- 2014: 41.7 %; and
- 2015: 45.5 %.

Source: <https://ec.europa.eu/social/BlobServlet?docId=20318&langId=en>

### **Case Study 4. Responding to inspection records of who is working without contract in agriculture, Spain**

**Early warning signal:** An investigation of inspection records from the agricultural sector revealed that in 2018, 32 % of those working without contract and social insurance violations and 69 % of the perpetrators detected in the agricultural sector were Romanian.

**Description of early intervention:** The Spanish Labour and Social Security Inspectorate (ITSS) thus invited the Romanian Labour Inspectorate to:

- Detect possible crimes of labour exploitation, and human trafficking for the purpose of labour exploitation, involving Romanian workers; and
- Detect possible infringements concerning undeclared work, labour, social security and occupational safety and health (OSH) regulations.

Between 1 and 4 July 2019, the Spanish Police and labour inspectorate along with the Romanian Police and labour inspectorate carried out four days of intensified inspections on the situation of workers in the garlic harvesting campaign in Albacete.

**Evaluation of effectiveness of the early intervention:** Outcomes for the activity



included the following:

- More than 500 workers were informed about their rights in Spain;
- Four people were arrested for trafficking crimes for the purpose of labour exploitation; and
- Eight victims were released from situations involving precarious working and living conditions (working hours, environmental conditions, salaries, threats, injuries, etc.).

Source: <https://ec.europa.eu/social/BlobServlet?docId=21817&langId=en>

### **Case Study 5. Responding to the extensiveness of undeclared work in the household services sector, Sweden**

**Early warning signal:** A survey by the tax office on purchasing and performing undeclared work in 2005 revealed that domestic services, such as cleaning, gardening or home repairs are often performed by workers who do not declare this income to authorities, and it estimated that circa 30 million hours of domestic services were undeclared in Sweden.

**Description of early intervention:** In July 2007 the Swedish Government introduced a tax deduction on household services (RUT) which covers cleaning, laundry, moving services, gardening, child-minding and care services and ROT (repairs, conversion, and extensions). This provides tax deductions for consumers on the labour costs of domestic services, which aim to increase declared work and boost employment.

ROT deductions cover home repairs, conversions and extensions and reduce the cost of labour for these services by 30 %. RUT deductions cover cleaning, maintenance and laundry and reduce labour costs by 50 %.

#### **Evaluation of effectiveness of the early intervention:**

- Based on sample interviews with customers of RUT and ROT services, the Swedish Tax Agency estimated that the number of households buying services which are not declared has decreased by 10 % since 2005.
- ROT or RUT schemes have changed the public's attitude towards undeclared work. In interviews with the public, the Swedish Tax Agency found that acceptance of purchasing declared services has increased.
- The schemes have created around 30 000 jobs (out of which, 23 000 people were previously unemployed). It also created employment opportunities for people who face challenges entering the labour market, such as refugees or citizens from other EU countries.

Source: <https://ec.europa.eu/social/BlobServlet?docId=21736&langId=en>

These case studies provide examples of how records of inspections, employment registers and wider surveys have been used by enforcement authorities to identify early warning signals, and how this has then led to the development of policy interventions to tackle the problem identified.

## **7.2 Under-declared employment: policy responses to negative signals**

This section provides case studies of the type of negative signal enforcement authorities have used to identify a growth in under-declared employment and outlines the early intervention pursued in response. Case study 6 provides an example of an early intervention taken in Romania and case study 7 a study of how Lithuania responded to an identification in inspection records of a growth in work time violations.

## Case Study 6. An early intervention to prevent under-declared employment in Romania: responding to the early warning signal of a growth of part-time employment

**Early warning signal:** In Romania, a growth in part-time employment was observed and this was seen to be a proxy indicator of the growth of under-declared employment in the country, with employers registering employees as part-time to reduce tax and social insurance contributions when the employees were in fact on full-time contracts.

**Description of early intervention:** To respond to the under-reporting of wages, the Emergency Governmental Ordinance no. 4/2017 was introduced from July 2017 amending the Law no. 227/2015 of the Fiscal Code.

When the gross monthly income of a part-time individual employment contract is below the level of the national minimum gross wage (calculated for full-time contracts), the level of social contributions due by employers is equivalent to the national minimum gross wage. As such, regardless of the number of hours worked, the tax due is calculated at the level of a full-time contract (8 hours per day). The following employee categories are exempted: a) students aged below 26 years old, registered to an educational program; b) apprentices under 18 years old; c) people with disabilities who are legally allowed to work less than 8 hours a day; d) those having the status of pensioners (retired persons); e) those who have a monthly income from wages based on two or more individual employment contracts which cumulate a level equivalent to at least the national minimum wage level. The new taxation level was applied from August 2017.

### Evaluation of effectiveness of the early intervention:

When this policy measure was implemented, as the table below indicates, the number of part-time contracts decreased by 119 254 (an 11 % reduction in part-time employment in August compared with July). Full-time contracts, meanwhile, increased by 61 053 in August compared with July. It might be that a share of the part-time contracts concealed *de facto* full-time employees which, under the new legislation, were transformed into full-time contracts. However, the total number of employees, which until August increased every month, decreased by 58 201 in August compared with July. What proportion of these part-time workers were made redundant and what proportion moved from under-declared employment into wholly undeclared employment is not known.

**Table 1.** Active employment contracts in Romania (January-September 2017)

Reference date	Active employment contracts				
	Full-time contracts		Part-time contracts		Total
	No.	%	No.	%	No.
31.01.2017	5 090 074	81.94	1 121 560	18.06	6 211 634
28.02.2017	5 105 718	81.84	1 133 165	18.16	6 238 883
31.03.2017	5 144 003	81.79	1 145 119	18.21	6 289 122
30.04.2017	5 154 396	81.72	1 153 186	18.28	6 307 582
31.05.2017	5 174 977	81.67	1 161 298	18.33	6 336 275
30.06.2017	5 195 489	81.84	1 153 140	18.16	6 348 629
31.07.2017	5 237 263	82.27	1 128 959	17.73	6 366 222
31.08.2017	5 298 316	83.99	1 009 705	16.01	6 308 021
30.09.2017	5 324 959	84.54	973 809	15.46	6 298 768

Notes:

1) Certain categories of workers such as civil servants, military officers, justice personnel, etc. are evidenced by the National Agency for Fiscal Administration and are not subject to the registration in ReGES.

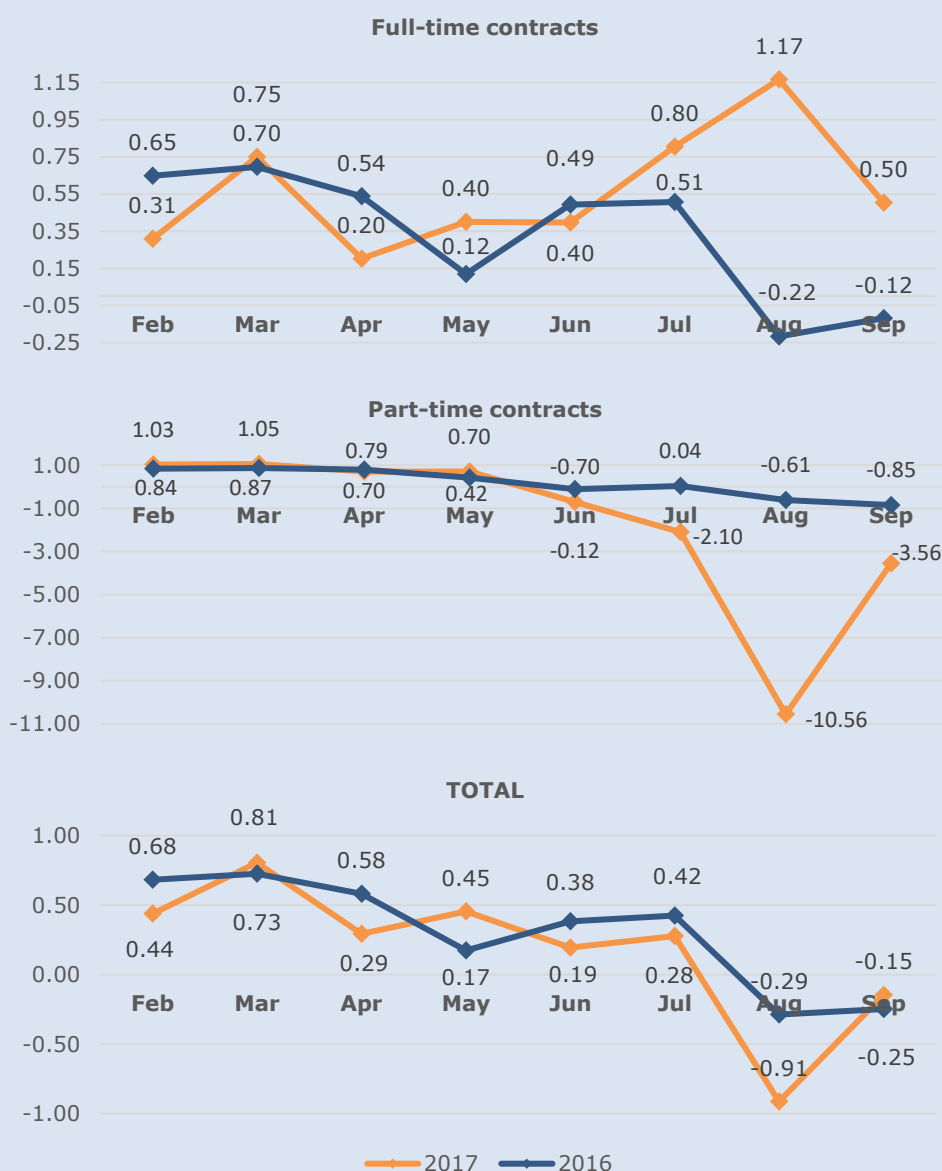
2) One person can have more employment contracts.

Source: own calculations based on data extracted from the Annual Activity Report of Labour Inspection for 2017

(<https://www.inspectiamuncii.ro/documents/66402/187655/Raport+de+activitate+a+Inspec%C8%9Biei+Muncii+pentru+anul+2017%2C+%C3%AEntocmit+%C3%AEn+baza+Conven%C8%9Bililor+81+%C8%99i+129+ale+Organiza%C8%9Biei+Interna%C8%9Bionale+a+Muncii.pdf/9a5a0e57-4820-4476-8b4c-9ca22b1c8cc2>)

To better understand the crude data in Table 1, a comparative analysis of the monthly growth rate of full-time contracts, part-time contracts and the total number of active employment contracts in Romania in both 2016 and 2017 is provided in Figure 1 in order to compare the trends in the two years and better assess the legislative effect. This further supports the tentative conclusion that a share of the part-time contracts have been transformed into full-time contracts, having a positive effect on under-declared employment but at the same time, the overall size of the labour force decreased. In only two months, 67 454 jobs disappeared, suggesting that some formal jobs either disappeared or the moved into wholly undeclared work.

**Figure 1.** Monthly growth rate of full-time contracts, part-time contracts and the total number of active contracts in Romania, in % (February - September, 2016 and 2017)



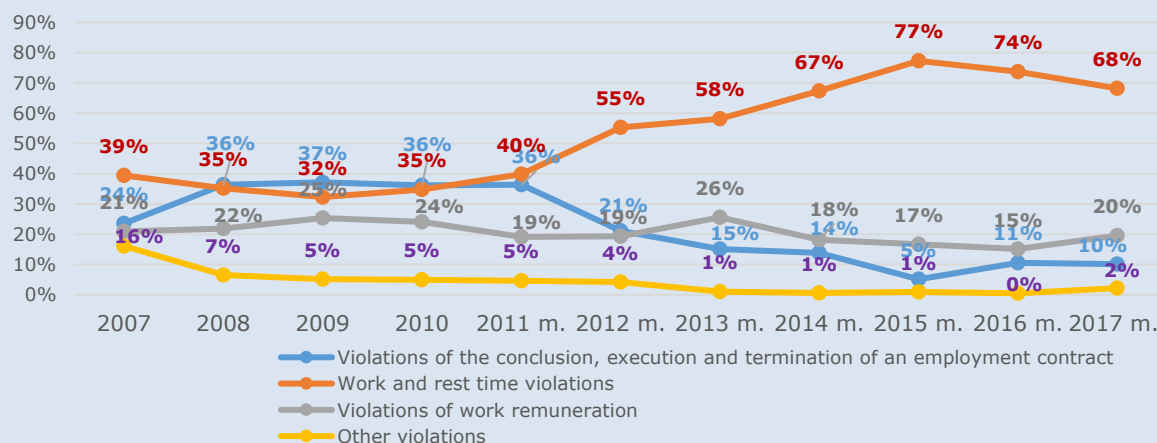
Source: own calculations based on data extracted from the Annual Activity Report of Labour Inspection for 2016

(<https://www.inspectiamuncii.ro/documents/66402/187655/Raport+de+activitate+al+Inspectiei+Muncii+pentru+anul+2016.pdf/13ad69c8-57ce-4e03-8fcd-dfa3260893cb>)

and 2017  
(<https://www.inspectiamuncii.ro/documents/66402/187655/Raport+de+activitate+a+Inspec%C8%9Biei+Muncii+pentru+anul+2017%2C+%C3%AEntocmit+%C3%AEn+baza+Conven%C8%9Bii+ilior+81+%C8%99i+129+ale+Organiza%C8%9Biei+Interna%C8%9Bionale+a+Muncii.pdf/9a5a0e57-4820-4476-8b4c-9ca22b1c8cc2>)

## Case Study 7. Responding to the growth in working time violations in Lithuania

**Early warning signal:** As the graphic below reveals, an analysis of inspection records revealed the growth of work time and rest time violations, and envelope wage payments, in Lithuania as a proportion of all infringements, and a decline in the share of infringements related to the signing, performance and termination of employment contracts.



**Description of early intervention:** In April 2015, a warning letter was sent to companies identified as not recording all hours worked by employees and paying *envelope wages* (where a part of the wage/salary paid to the worker is undeclared by the employer).

To identify these 'risky taxpayers', a comparison of the databases of the State Labour Inspectorate, the State Tax Inspectorate and the State Social Insurance Fund Board was undertaken. The warning letter informed that wages paid to their employees are significantly lower compared to other companies operating in that particular sector and/or region, and some were asked to come to the tax inspectorate to give explanations on low wages paid or other risk indicators.

### Evaluation of effectiveness of the early intervention:

In the first half of 2016, the following **outputs** were achieved as a result of the measure:

- Non-compliance was identified in 6 167 companies;
- Employers were served 261 claims;
- 62 undeclared workers were identified;
- 329 persons who worked in violation of the working and rest time regime or who were not paid the prescribed remuneration for work on days off, overtime and night work were identified;
- 153 administrative protocols were written out; and
- Fines imposed amounted to more than EUR 60 000.

The following are some of the **outcomes** as a result of the measure:

- Comparing the cases of non-compliance, the share of employees receiving minimum monthly or lower wages in November 2016 decreased by 8.3 percentage points compared to January 2016 (as compared to a 2.9 percentage points decrease for all companies in Lithuania);
- The average wage in the third quarter of 2016 increased by approximately 9.6 % compared to the first quarter of 2016 (average for all companies – 6 %); and
- Collection of personal income tax during quarter 1 and quarter 3 2016 increased

by 12.4 % compared to 1 – 3Q 2015 (average for all companies – 5.4 %).

Source: <https://ec.europa.eu/social/BlobServlet?docId=18698&langId=en>

### 7.3 Bogus self-employment: policy responses to negative signals

Enforcement authorities have also used various early warning signals of the growth of bogus self-employment and pursued early interventions in response.

A first step required to tackle the misclassification of employment relationships is that clear legal definitions are required of dependent employment, self-employment and bogus self-employment. In many EU Member States where such clear legal definitions have not existed, the early intervention pursued in response to warning signals that bogus self-employment may be growing, is to provide legal definitions of dependent employment, self-employment and even sometimes bogus self-employment. This is based on the premise that unless such legal definitions exist, proving worker misclassification will be a challenge. Case study 8 provides an example from Ireland of this early intervention whereby criteria are listed that enable the classification of workers as either employees or self-employed, to enable employment misclassification to be easier to identify.

#### **Case Study 8. Developing criteria to determine the employment status of workers in Ireland**

**Early warning signal:** In part in response to concerns about the rise of bogus self-employment, Ireland developed a *Code of Practice for Determining the Employment or Self-Employment Status of Individuals in 2018*.

**Description of early intervention:** This code of practice states:

- 'While all the following factors may not apply, an individual would normally be an *employee* if he or she:
  - Is under the control of another person who directs as to how, when and where the work is to be carried out.
  - Supplies labour only.
  - Receives a fixed hourly/weekly/monthly wage.
  - Cannot subcontract the work. If the work can be subcontracted and paid for by the person subcontracting the work, the employer/employee relationship may simply be transferred.
  - Does not supply materials for the job.
  - Does not provide equipment other than the small tools of the trade. The provision of tools or equipment might not have a significant bearing on concluding that employment status may be appropriate considering all the circumstances of a particular case.
  - Is not exposed to personal financial risk in performing the work.
  - Does not assume any responsibility for investment and management in the business.
  - Does not have the opportunity to profit from sound management in the scheduling of engagements or in the performance of tasks arising from the engagements.
  - Works set hours or a given number of hours per week or month.
  - Works for one person or for one business.
  - Receives expense payments to cover subsistence and/or travel expenses.
  - Is entitled to extra pay or time off for overtime.
- While all the following factors may not apply to the job, someone would normally be *self-employed* if they:
  - Own their own business.

- Are exposed to financial risk by having to bear the cost of making good faulty or substandard work performed under the contract.
- Assume responsibility for investment and management in the enterprise.
- Can profit from sound management in the scheduling and performance of engagements and tasks.
- Have control over what is done, how it is done, when and where it is done and whether they do it personally.
- Are free to hire other people, on their terms, to do the work which has been agreed.
- Can provide the same services to more than one person or business at the same time.
- Provide the materials for the job.
- Provide equipment and machinery necessary for the job, other than the small tools of the trade or equipment which in an overall context would not be an indicator of a person in business on their own account.
- Have a fixed place of business where materials, equipment etc. can be stored.
- Cost and agree a price for the job.
- Provide their own insurance cover e.g. public liability cover etc.
- Control the hours of work in fulfilling the job obligations.'

**Evaluation of effectiveness of the early intervention:** Although no formal evaluation of the impact of this code of practice has been conducted, it is now much easier to be able to determine the employment status of a worker and to prevent employment misclassification.

Source: *Code of Practice for Determining the Employment or Self-Employment Status of Individuals in 2018*

If clear legal definitions are already established, and enforcement authorities have the legal competence to tackle bogus self-employment, then enforcement authorities can pursue other early interventions if there is a perception that bogus self-employment is growing. Two broad reasons exist for bogus self-employment. On the one hand, there is unintentional bogus self-employment. This arises due to a lack of knowledge of the rules or due to complex legal rulings being difficult to understand. On the other hand, there is intentional bogus self-employment, driven by the pursuit of financial gain.

Where financial gain is the driving force, enforcement authorities can pursue early interventions to make the costs of misclassifying workers outweigh the benefits. Firstly, enforcement authorities can increase the costs of misclassifying workers by improving the sanctions for misclassification (i.e., ranging from requalification of the employment relationship into the correct contractual relationship to criminal penalties, with various civil and economic sanctions in between) and improving risk assessment systems for identifying bogus self-employment via data mining and analysis.

Enforcement authorities can also pursue policy initiatives to incentivise the correct classification of employment relationships by:

- Making the financial costs of employers outsourcing to the self-employed equal to using dependent employment;
- Making it easier for employers to legitimise their employment relationships; and
- Extending social protection to the self-employed (or even bogus self-employed) so that there are fewer advantages associated with misclassifying employment relationships.

Case study 9 provides an example of the first option of equalising the financial costs to employers of using dependent employment and outsourcing to the self-employed through a contract for services. This was implemented in Romania in 2016.



## Case Study 9. Responding to bogus self-employment by equalising the financial costs to employers of using dependent employment and outsourcing to the self-employed, Romania

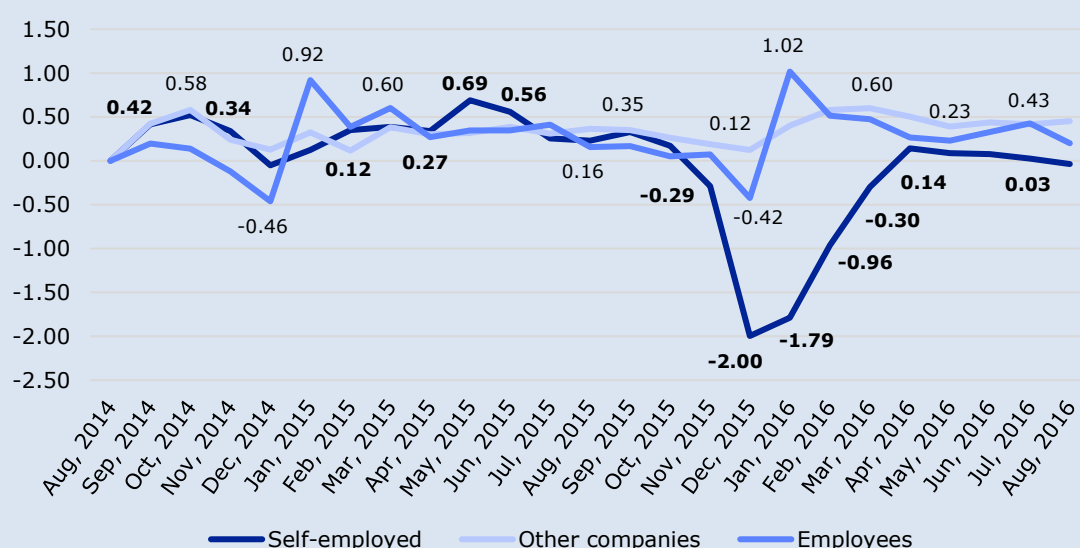
**Early warning signal:** There were concerns that the growth of self-employment in Romania was not entirely composed of 'genuine' self-employment and that some of this growth was due to the growth of 'bogus self-employment'. This growth was because the financial costs to employers of outsourcing to the 'self-employed' was cheaper than using dependent employees.

**Description of early intervention:** In January 2016, changes to the Romanian Fiscal Code not only introduced a list of criteria for defining whether a commercial activity was dependent or independent but also equalised the costs to employers of employing a dependent employee and a self-employed person on a contract for services. This was achieved by altering the tax and social contribution levels of self-employment, which meant that the benefit for employers of using bogus self-employment disappeared. This change was announced in October 2015.

### Evaluation of effectiveness of the early intervention:

To understand the trends in self-employment before and after the announcement of this policy initiative, Figure 1 reports the monthly growth rate of self-employment between August 2014 and August 2016, alongside the monthly growth rate of all other companies (e.g. limited liability companies, joint stock companies) and the total number of employees. This reveals that the number of self-employed in Romania registered a positive monthly growth rate between August 2014 and October 2015, with the highest monthly value (0.59 %) in May 2015. However, immediately after the new contribution levels were announced, the monthly growth rate of self-employed began a downward path. The number of self-employed decreased by 0.29 % in November 2015, 2 % in December 2015, 1.79 % in January 2016, 0.96 % in February 2016 and 0.3 % in March 2016. The upward path was resumed in April 2016, but growth rates were very low (e.g. 0.14 % in April, 0.03 % in July 2016).

**Figure 1.** Monthly growth rate of self-employed, other companies and the total number of employees, in % (August 2014-August, 2016)



After announcing the new taxation level, the number of all other companies increased (e.g. 0.6 % in March 2016). Moreover, the number of employees decreased less in December 2015 than in the same period in 2014 (0.42 % compared with 0.46 %) and in January 2016 increased more than in the same period in 2014 (1.025 % compared with 0.92 %). Thus, there are reasonable grounds to assume those who stopped being self-

employed (some of them doubtless bogus self-employed considering their quick decision not to operate under the new legislation) became either employees, migrated to another legal form for carrying out their economic activities or entered the undeclared economy. This decline in self-employment also applies when a regression analysis is undertaken, and one controls for other variables that influence the level of self-employment.

This provides tentative evidence that the new legislation helped to reduce the level of bogus self-employment in Romania. It suggests that countries that introduce criteria for defining whether an employment relationship is bogus self-employment and move towards equalising the tax and social contributions of employing somebody as a dependent employee or self-employed on a 'contract for services', can reduce the level of bogus self-employment. In Romania, however, a caveat is required. Some of those previously employed on a contract for services by employers might have left the declared economy altogether.

*Source: Williams and Horodnic (2017d)*

Bogus self-employment, however, is not always intentional. It can be also unintentional due to a lack of knowledge of the rules and complex legal rulings being difficult to understand, or due to a lack trust in the state and/or the benefits of compliance.

**Education and awareness-raising campaigns** can therefore play a key role in tackling bogus self-employment and social partners can play a lead role in such initiatives. The provision of education campaigns and online tools by enforcement authorities and social partners to help workers understand their rights and come forward are important.

One example of this is that the Irish Department of Employment and Social Protection in May 2018 ran a campaign<sup>4</sup> through online and radio adverts, lasting one month. It reached out to bogus self-employed workers and explained the implications to their social welfare benefits and employment rights.

## 8 CONCLUSIONS

This report has provided methods for conducting future-oriented 'horizon scanning' on two levels. On the one hand, it has developed an early warning system of the structural developments that may lead to increases in undeclared work, allowing Member States to take early interventions on the policy level. On the other hand, it has revealed the type of horizon scanning that enforcement authorities might undertake and reviewed the early interventions that enforcement authorities have taken in response to specific negative signals, to facilitate mutual learning across Member States on what works and what does not.

### Horizon scanning: an early warning system for EU Member States

The findings of a ten-year horizon scanning of the structural conditions identified in previous empirical studies as associated with a growth of undeclared work, are that for reducing undeclared work there is a need to:

- Reduce **formal institutional resource misallocations and inefficiencies**
  - More attention is required from some Member States to improve government effectiveness and reduce the perceived level of corruption (e.g., Cyprus, Hungary, Finland, Malta, Slovenia, and Sweden);
- Tackle **formal institutional voids and weakness**
  - Although improvements were found in terms of reducing underdevelopment and the regulatory burden, all Member States reduced the expense of

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<sup>4</sup> For details: <https://www.gov.ie/en/publication/80e5ab-prsi-pay-related-social-insurance/>



- government (as % of GDP) which represents a threat for tackling undeclared work;
- Worsening levels of social contributions and a reduced impact of social transfers on poverty reduction are found in one-third of Member States (e.g., Belgium, Croatia, Denmark, France, Hungary, Ireland, Luxembourg, Malta, Portugal, Romania, Slovenia, Spain, and Sweden);
- Most Member States have reduced the rate of severe material deprivation and the number of people at risk of poverty or social exclusion but only about a half have succeeded in reducing income inequality;
- Labour market conditions improved in most Member States;
- Reduce **formal institutional powerlessness**
  - Improvements in the perceived regulatory quality and the rule of law are necessary in more than two-thirds of Member States and in about one-third of them measures to improve trust in public institutions;
- Reduce **formal institutional instability and uncertainty**
  - More emphasis on improving democracy, reducing uncertainty and improving political stability is required in many Member States;
- Improve **the informal institutions**
  - Measures aimed at reducing the acceptability of undeclared work and increasing vertical and horizontal trust are necessary in most Member States.

### Assessing trends in undeclared work by enforcement authorities and early interventions

Enforcement authorities can assess trends in undeclared work by making greater use of the databases available to them, namely: (i) records of inspections (i.e., inspection registers or case management databases), (ii) data bases such as employment registers, tax return data and social insurance datasets, and (iii) surveys (i.e., Eurobarometer survey on undeclared work conducted in 2007, 2013 and 2019; European Working Conditions Survey conducted in 2005, 2010 and 2015), to identify predictive trends.

In the longer term, however, there is a need to shift away from this pragmatic approach and towards a more **strategic approach** towards horizon scanning. In addition, Member State enforcement authorities need better training in horizon scanning and **capacity building** through mutual learning as well in using more **sophisticated forecasting methods** (i.e., 'future basing', scenario-building, simulations, experimental laboratory studies of different scenarios and behavioural analyses).

There is also a need to **share findings** across enforcement authorities within a Member State and between Member States, and for **learning to be shared** on horizon scanning methods across Member States. This is a relevant issue for the European Labour Authority which is an ideal host for such horizon scanning methods to be developed.

Finally, there is a need for ex-ante and ex-post evaluations of what works and what does not. Currently, the **interventions adopted** in response to early warning signals are composed of largely singular interventions and few examples exist of a shift away from singular interventions to multiple interventions composed of a mix of deterrence measures, incentives and education and awareness raising initiatives. The current 'knowledge bank' of good practices compiled by the European Platform tackling undeclared work reveals the current **lack of evaluation of the effectiveness of policy interventions**, and the lack of knowledge on what works and what does not.

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## APPENDIX

**Table A1. Determinants of undeclared work (unregistered employment)**

Variable	Result	Study and coverage
<b>A. FORMAL INSTITUTIONS</b>		
<b>I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES</b>		
<b>1. Level of modernisation of government</b>		
Government effectiveness (Institutional quality)	Negative association. Higher institutional quality reduces the shadow economy.	Dreher et al., 2009 (135 countries); Eilat and Zinnes, 2002 (25 transition countries); Torgler and Schneider, 2009 (55 to 88 countries)
Quality of government (European Quality of Government Index)	Negative association. The higher the quality of government the lower the prevalence of undeclared work.	Williams et al., 2017a (EU-28 except Malta)
Satisfaction with the government	Negative and significant effect on the propensity to work without contract (only in East and West Europe) or on shadow economy.	Hazans, 2011a (30 European countries); Putniņš and Sauka, 2015 (Baltic countries)
Satisfaction with tax system	Negative association. Dissatisfied firms engage in more shadow activities.	Putniņš and Sauka, 2015 (Baltic countries)
<b>2. Formal institutions acting in a corrupt manner</b>		
Transparency International's perceptions of public sector corruption	No association with the size of shadow economy.	Williams, 2014a (Central and Eastern Europe).
	Positive association. The higher the perceived level of corruption the higher the prevalence of undeclared work and shadow economy.	Eilat and Zinnes, 2002 (25 transition countries); Krasniqi and Williams, 2017 (35 Eurasian countries); Teobaldelli, 2011 (73 countries); Williams and Horodnic A.V., 2019 (112 countries); Williams et al., 2017a (EU-28 except Malta)
	No robust relationship between corruption and the shadow economy. In low income countries a positive relationship has been identified. The higher the corruption, the larger the shadow economy.	Dreher and Schneider, 2010 (98 countries)
	Corruption increase the damage of shadow economy (its size) on pollution.	Biswas et al., 2012 (100 countries)
Control of corruption	Negative association. The higher the control of corruption the lower the shadow economy.	Torgler and Schneider, 2007b (88 to 100 countries); Torgler and Schneider, 2009 (55 to 88 countries)
<b>II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES</b>		
<b>1. Modernisation Explanation - Level of 'development'</b>		
GDP per capita	Negative association. Countries with larger GDP per capita have lower prevalence of undeclared work and shadow economy.	Feld and Schneider, 2010 (21 OECD developed countries); Krasniqi and Williams, 2017 (35 Eurasian countries); Teobaldelli, 2011 (73 countries); Williams, 2014b (EU-27); Williams and Horodnic A.V., 2019 (112 countries); Williams et al., 2017a (EU-28 except Malta)
Household final consumption per capita	Negative association. Countries with higher household final consumption per capita have smaller share of informal employment.	Williams and Horodnic A.V., 2019 (112 countries)
Human Development Index (HDI) (average	Negative association. Countries with higher HDI have smaller share of informal	Eilat and Zinnes, 2002 (25 transition countries); Williams and Horodnic A.V.,



of: a long and healthy life, being knowledgeable and have a decent standard of living)	employment and shadow economy.	2019 (112 countries)
Social Progress Index (SPI) (the extent to which countries provide for the social and environmental needs of their citizens)	Negative association. Countries with higher SPI have smaller share of informal employment.	Williams and Horodnic A.V., 2019 (112 countries)
Capital market	Negative association. Stronger capital markets associated with smaller size of shadow economy.	Eilat and Zinnes, 2002 (25 transition countries)
Banking sector quality	Negative association. Higher banking sector quality is associated with smaller size of shadow economy.	Eilat and Zinnes, 2002 (25 transition countries)
Percentage of self-employed	Self-employment represent a determinant of shadow economy.	Dell`Anno, 2007 (Portugal); Dell`Anno, et al., 2007 (France, Spain and Greece); Schneider et al., 2015 (EU-28 plus Norway, Switzerland and Turkey); Tafenau et al., 2010 (European Union)
Entrepreneurship	Negative association. Likelihood of entry for both types of entrepreneurship decreases as the shadow economy becomes larger.	Estrin and Mickiewicz, 2012 (47 countries)
Infrastructure	Negative association. Better infrastructure is associated with lower shadow economy.	Eilat and Zinnes, 2002 (25 transition countries)
<b>2. State intervention</b>		
Intensity of regulation	Positive effect. Higher regulation results in increasing shadow economy.	Buehn et al., 2009 (Germany)
Bureaucracy	Positive association. Overregulation associated with shadow economy.	Dell`Anno, 2007 (Portugal)
Bureaucratic quality	Negative association. Higher quality is associated with lower shadow economy.	Torgler and Schneider, 2007b (88 to 100 countries)
Regulatory burden	Positive association. Reducing bureaucracy decrease size of shadow economy.	Eilat and Zinnes, 2002 (25 transition countries); Teobaldelli, 2011 (73 countries)
Business flexibility (Fraser Institute index of credit, labor, and firm flexibility)	Informal employment is larger where there is lower business flexibility.	Loayza and Rigolini, 2011 (54 countries across the globe)
Expense of government (% GDP)	Negative association. Intensity of informal employment is lower as the expense of government as a share of GDP increases.	Williams and Horodnic A.V., 2019 (112 countries).
Government consumption	Positive association. Higher consumption is related with larger shadow economy.	Dell`Anno, 2003 (Italy)
Healthcare expenditure	Negative association. The greater the healthcare expenditure the lower is the prevalence of unregistered employment.	Krasniqi and Williams, 2017 (35 Eurasian countries)
Health and education (% GDP)	No association with shadow economy.	Eilat and Zinnes, 2002 (25 transition countries)
Current taxes	No correlation with size of shadow economy.	Williams, 2014a (Central and Eastern Europe)
Taxes on income and profits as a % of GDP and taxes on goods and services as % of revenue	No correlation with size of shadow economy and informal employment.	Williams, 2014a (Central and Eastern Europe); Williams and Horodnic A.V., 2019 (112 countries)

	No correlation with size of shadow economy.	Williams, 2014a (Central and Eastern Europe)
Tax revenue as a % of GDP	Negative association. Higher level of tax on revenue as a percentage of GDP associated with lower size of informal employment or shadow economy.	Eilat and Zinnes, 2002 (25 transition countries); Williams, 2014a (Central and Eastern Europe); Williams and Horodnic A.V., 2019 (112 countries)
Total tax rate as a % of GDP	No correlation with size of shadow economy.	Eilat and Zinnes, 2002 (25 transition countries); Williams, 2014a (Central and Eastern Europe)
Share of direct and/ or indirect taxation (% GDP)	Positive association. High level of direct and indirect taxation associated with larger shadow economy.	Feld and Schneider, 2010 (21 OECD developed countries); Schneider, 2000 (Austria); Schneider, 2010 (21 OECD developed countries); Schneider et al., 2015 ( EU-28 plus Norway, Switzerland and Turkey); Tafenau et al., 2010 (European Union)
	The reduction of tax burden on labour is mildly effective in reducing undeclared work.	Ciccarone et al., 2014 (12 Euro area countries); Vos et al., 2011 (Belgium)
Taxation on labour	No correlation between Implicit Tax on Labour with the size of undeclared work or shadow economy.	Baric and Williams, 2013 (EU-27); Eilat and Zinnes, 2002 (25 transition countries); Williams, 2014a (Central and Eastern Europe); Williams et al., 2017a (EU-28 except Malta)
Social contribution expenditure (% of revenue)	Negative association. The greater the state expenditure on social redistribution, the lower is the prevalence of unregistered employment.	Krasniqi and Williams, 2017 (35 Eurasian countries); Williams and Horodnic A.V., 2019 (112 countries)
Total social expenditure per head of the population at current prices and taking into account personal PPPs	Negative association. The greater is the level of social expenditure, the smaller is the shadow economy.	Williams, 2014a (Central and Eastern Europe); Williams, 2014b (EU-27)
	Negative association. The more effective are social transfers in reducing poverty, the lower is the prevalence of undeclared work and of the shadow economy.	Baric and Williams, 2013 (EU-27); Williams, 2014a (Central and Eastern Europe); Williams, 2014b (EU-27); Williams et al., 2017a (EU-28 except Malta)
Impact of redistribution via social transfers	Social benefits represent a main cause of shadow economy.	Dell'Anno, 2007 (Portugal)
Subsidies and other transfer (% of expense)	Negative association. The greater the state intervention the lower is the prevalence of unregistered employment.	Krasniqi and Williams, 2017 (35 Eurasian countries)
State expenditure on labour market interventions aimed at correcting disequilibria	Negative association. The higher levels of state expenditure on labour market interventions the lower is the prevalence of undeclared work and the smaller the shadow economies.	Baric and Williams, 2013 (EU-27); Williams, 2014a (Central and Eastern Europe); Williams, 2014b (EU-27); Williams et al., 2017a (EU-28 except Malta)
Policies to increase the efficiency/ productivity of declared work (active labour market policies)	Negative association. Highly effective in reducing the share of undeclared work. When labour productivity is lower, the informality is larger.	Ciccarone et al., 2014 (12 Euro area countries); Loayza and Rigolini, 2011 (54 countries across the globe)
Unemployment rate (long-term very long-term)	Weak positive association. The higher the unemployment rate the higher the prevalence of undeclared work. Informal workers experience in a higher proportion long-term employment compared with formal workers.	Dell'Anno, 2003 (Italy); Dell'Anno, 2007 (France, Spain and Greece); Eilat and Zinnes, 2002 (25 transition countries); Feld and Schneider, 2010 (21 OECD developed countries); Hazans, 2011b (30 European countries); Schneider, 2010 (21 OECD developed countries); Schneider et al., 2015 (EU-28 plus Norway, Switzerland and Turkey); Tafenau et al., 2010 (European Union); Williams et al., 2017a (EU-28 except Malta)

Job vacancy rate	No association with the prevalence of undeclared work.	Williams et al., 2017a (EU-28 except Malta)
Population at risk of poverty	Positive association. Countries with higher levels of poverty have larger shadow economies.	Williams, 2014a (Central and Eastern Europe)
Poverty gap at national poverty lines (%) + Poverty gap at \$1.90 a day	Positive association. Countries with large poverty gap have larger prevalence of informal employment.	Williams and Horodnic A.V., 2019 (112 countries)
Severe material deprivation	Positive association. Countries with higher proportions of the population living in severe material deprivation have larger shadow economies.	Williams, 2014a (Central and Eastern Europe)
Income inequality	Positive association. Countries with higher levels of income inequality have larger shadow economies.	Williams, 2014a (Central and Eastern Europe)
	Moderate positive association. Countries with higher income inequalities have higher prevalence of undeclared work.	Williams et al., 2017a (EU-28 except Malta)
Gini coefficient	Positive association. Countries with inequality have higher prevalence of undeclared work and larger shadow economies.	Baric and Williams, 2013 (EU-27); Williams, 2014a (Central and Eastern Europe); Williams, 2014b (EU-27); Williams and Horodnic A.V., 2019 (112 countries); Williams et al., 2017a (EU-28 except Malta)
	No association with shadow economy.	Eilat and Zinnes, 2002 (25 transition countries)
<b>III. FORMAL INSTITUTIONAL POWERLESSNESS</b>		
<b><i>Lack of capacity to enforce policies</i></b>		
The quality of police and judicial system	Negative association. The higher the degree to which legal contracts are enforced and the higher efficiency of the police and judicial systems, the lower the informal work.	Loayza and Rigolini, 2011 (54 countries across the globe)
	Higher efficacy of justice is positively related with shadow economy. (Interpreted by author as justice is related more with crimes, not with tax evasion).	Dell'Anno, 2003 (Italy)
Rule of law	Negative association. Poor enforcement associated with larger shadow economy. Greater rule of-law mitigates shadow activities.	Eilat and Zinnes, 2002 (25 transition countries); Feld and Schneider, 2010 (21 OECD developed countries); Schneider, 2010 (21 OECD developed countries); Torgler and Schneider, 2007b (88 to 100 countries); Torgler and Schneider, 2009 (55 to 88 countries)
Strength of legal rights	No association with the prevalence of unregistered employment.	Krasniqi and Williams, 2017 (35 Eurasian countries)
Regulatory quality	Negative association. The higher the quality of regulatory environment the lower the shadow economy.	Torgler and Schneider, 2009 (55 to 88 countries)
Voice and accountability	Negative association. Better political processes, civil liberties, and political rights associated with smaller shadow economy.	Torgler and Schneider, 2009 (55 to 88 countries)
Inspections/ Risk of detection	Negative effect on tax compliance and tax revenue.	Di Porto, 2011 (Italy)
	In countries where people have high trust in public authorities, the power of tax authorities is perceived as legitimate	Kaplanoglou and Rapanos, 2015 (Greece); Kogler et al., 2013 (Austria, Hungary, Romania and Russia)

	whereas in low trust environments the power of authorities is perceived coercive and has therefore a negative influence on tax compliance.	
	Those viewing the risk of being caught as high are less likely to engage in undeclared work (and tax evasion and misreporting) compared with those who consider the risk of being caught as small. A high risk of detection/audit has a positive effect on the declared income.	Feld and Larsen, 2012 (Germany); Horodnic and Williams, 2019 (EU-27); Mazzolini et al., 2017 (Italy); Putniņš and Sauka, 2015 (Baltic countries); Webley and Halstead, 1986 (UK); Williams and Horodnic, 2017a (EU-28)
	No relationship.	Horodnic and Williams, 2018 (EU-28) – measured at macro level; Shaw et al., 2008 (UK); Williams and Bezeredi, 2018 (North Macedonia); Williams and Franić, 2015 (Croatia); Williams and Franić, 2016 (Bulgaria); Williams and Yang, 2018 (Bulgaria); Williams et al., 2017b (Croatia)
Sanctions (for undeclared work)	Those perceiving the expected sanctions as high are less likely to engage in undeclared work (and tax evasion and misreporting) compared with those perceiving the sanctions as low. Increased fines reduce tax evasion.	Feld and Frey, 2002 (Switzerland); Horodnic and Williams, 2019 (EU-27); Putniņš and Sauka, 2015 (Baltic countries); Williams and Horodnic, 2017a (EU-28)
	Higher penalty rates reduce undeclared work very little and have negative effects on employment.	Ciccarone et al., 2014 (12 Euro area countries)
	No relationship.	Feld and Larsen, 2012 (Germany); Hartl et al., 2015 (Austria); Horodnic and Williams, 2018 (EU-28) – measured at macro level; Webley and Halstead, 1986 (UK); Williams and Bezeredi, 2018 (North Macedonia); Williams and Franić, 2015 (Croatia); Williams and Franić, 2016 (Bulgaria); Williams and Yang, 2018 (Bulgaria); Williams et al., 2017b (Croatia)
<b>Lack of power in terms of the ability to provide incentives to encourage adherence to the formal rules</b>		
Implicit Individual Internal Rate of Return (IRR) of the Pension Systems	Negative association. If the pension contributions generate losses for the or when the expected returns are close to break-even it makes no to little sense for people to engage in declared work.	Kąsek et al., 2008 (Central and Eastern Europe)
<b>Lack of trust in authorities</b>		
Trust in authorities	Moderate negative association. The higher the trust in authorities the lower the prevalence of undeclared work.	Williams et al., 2017a (EU-28 except Malta)
<b>IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY</b>		
Democracy	Negative association. Worse political environment is associated with greater shadow economy.	Eilat and Zinnes, 2002 (25 transition countries)
Government stability	Negative association. The higher the government stability the lower the shadow economy.	Torgler and Schneider, 2007b (88 to 100 countries); Torgler and Schneider, 2009 (55 to 88 countries)
Political risk	Negative association. The higher the political stability the lower the shadow economy.	Torgler and Schneider, 2007b (88 to 100 countries)
<b>B. INFORMAL INSTITUTIONS</b>		
Social capital/ Civil society	Negative association. The higher the social capital the lower the propensity of undeclared work or the size of shadow economy.	Arezzo, 2014 (Italy); Eilat and Zinnes, 2002 (25 transition countries)

Tax morale	<p>Negative association. The higher the tax morale the lower the participation in undeclared work or shadow economy.</p> <p>*Tax morale has the second biggest individual influence on shadow economy (amongst a large range of indicators).</p> <p>** When there is high tax morale, the power of authorities has little overall impact on the probability of participation in undeclared work and only increasing the perceived risk of detection that has a positive impact on reducing participation (and not the sanctions too).</p>	<p>Feld and Larsen, 2012 (Germany);</p> <p>*Feld and Schneider, 2010 (21 OECD developed countries); Horodnic and Williams, 2018 (EU-28); Horodnic and Williams, 2019 (EU-27); Krasniqi and Williams, 2017 (35 Eurasian countries);</p> <p>*Schneider, 2010 (21 OECD developed countries); Torgler and Schneider, 2007b (88 to 100 countries); Torgler and Schneider, 2009 (55 to 88 countries); Williams and Bezzeredi, 2018 (North Macedonia); Williams and Franić, 2015 (Croatia); Williams and Franić, 2016 (Bulgaria); Williams and Horodnic, 2015a (Nordic nations); **Williams and Horodnic, 2017a (EU-28); Williams and Horodnic, 2017b (Baltic Sea countries); Williams and Yang, 2018 (Bulgaria); Williams et al., 2017b (Croatia)</p>
Horizontal trust/ Social norm	<p>Negative association. The lower the horizontal trust (i.e., knowing people working undeclared) the higher the participation in undeclared work.</p>	<p>Horodnic and Williams, 2018 (EU-28); Horodnic and Williams, 2019 (EU-27); Williams et al., 2017b (Croatia)</p>
	<p>The effect of increasing the social stigma is similar to the effect of introducing higher penalty rates.</p>	<p>Ciccarone et al., 2014 (12 Euro area countries)</p>

**Table A2. Determinants of under-declared employment**

Variable	Result	Study and coverage
<b>A. FORMAL INSTITUTIONS</b>		
<b>I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES</b>		
<b>1. Level of modernisation of government</b>		
Government effectiveness	Negative association. The higher the effectiveness of government the lower the prevalence of envelope wages.	Franić, 2017 (EU-27/EU-28); Kayaoglu and Williams, 2017 (EU-27)
Quality of government (European Quality of Government Index)	Negative association. The higher the quality of government the lower the prevalence of envelope wages.	Williams and Horodnic, 2015b (East-Central Europe); Williams and Horodnic, 2016 (EU-28); Williams and Horodnic, 2017c (EU-28)
<b>2. Formal institutions acting in a corrupt manner</b>		
Corruption Perception Index	Positive association. The higher the perceived level of corruption the higher the prevalence of envelope wages.	Franić, 2017 (EU-27/EU-28); Kayaoglu and Williams, 2017 (EU-27); Williams, 2014c (EU-27); Williams, 2015 (East-Central Europe)
Control of corruption index	Positive association. The higher the corruption (i.e., the level of public power perceived as being exercised for private gain) the higher the prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27)
Share of firms stating that they are expected to give gifts in meetings with tax officials	No relationship.	Williams, 2014c (EU-27)
Percentage of firms making informal payments to public officials	No relationship.	Williams, 2014c (EU-27)
<b>II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES</b>		
<b>1. Modernisation Explanation - Level of 'development'</b>		
GDP per capita	Negative association. Countries with larger GDP in PPS have lower prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2014c (EU-27); Williams, 2015 (East-Central Europe); Williams and Horodnic, 2015b (East-Central Europe); Williams and Horodnic, 2016 (EU-28); Williams and Padmore, 2013 (EU-27)
<b>2. State intervention</b>		
Bureaucratic quality	Negative association. Countries with high quality state bureaucracy have lower prevalence of envelope wages.	Williams, 2014c (EU-27); Williams, 2015 (East-Central Europe)
Labour market regulation index	No relationship.	Franić, 2017 (EU-27/EU-28)
Total tax revenue	No relationship.	Williams, 2012 (East-Central Europe); Williams, 2015 (East-Central Europe)
	Negative association. Countries with higher total tax revenues have lower prevalence of envelope wages.	Williams, 2013 (EU-27)
Current tax on income, wealth etc.	Negative association. Countries with higher current taxes have lower prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2014c (EU-27); Williams and Horodnic, 2016 (EU-28); Williams and Horodnic, 2017c (EU-28)
Implicit tax rate of labour	Negative association. Countries with higher tax rate on labour have lower prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2012 (East-Central Europe); Williams, 2014c (EU-27); Williams,

		2015 (East-Central Europe); Williams and Horodnic, 2015b (East-Central Europe)
	No relationship.	Franić, 2017 (EU-27/EU-28); Williams, 2013 (EU-27); Williams and Horodnic, 2016 (EU-28); Williams and Horodnic, 2017c (EU-28)
Employer social contribution as % of GDP	No relationship.	Williams, 2012 (East-Central Europe); Williams, 2013 (EU-27)
Social protection expenditure	Negative association. The greater is the level of social expenditure, the lower prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2012 (East-Central Europe); Williams, 2013 (EU-27); Williams, 2014c (EU-27); Williams, 2015 (East-Central Europe); Williams and Horodnic, 2015b (East-Central Europe)
State expenditure on labour market interventions aimed at correcting disequilibria	No relationship.	Williams, 2012 (East-Central Europe); Williams, 2015 (East-Central Europe)
	Negative association. The greater is the level of state expenditure on labour market interventions, the lower prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2013 (EU-27); Williams and Horodnic, 2016 (EU-28); Williams and Horodnic, 2017c (EU-28)
Impact of redistribution via social transfers	Negative association. The more effective are social transfers in reducing poverty, the lower is the prevalence of envelope wages.	Williams, 2012 (East-Central Europe); Williams, 2013 (EU-27); Williams, 2014c (EU-27); Williams, 2015 (East-Central Europe); Williams and Horodnic, 2015b (East-Central Europe); Williams and Horodnic, 2016 (EU-28); Williams and Horodnic, 2017c (EU-28)
Population at risk of poverty	Positive association. Countries with higher levels of poverty have higher prevalence of envelope wages.	Franić, 2017 (EU-27/EU-28); Williams, 2015 (East-Central Europe)
Severe material deprivation	Positive association. Countries with higher proportion of the population suffering from severe material deprivation have higher prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2014c (EU-27); Williams and Horodnic, 2016 (EU-28); Williams and Horodnic, 2017c (EU-28)
In-work at-risk-of-poverty rate	Positive association. Individuals living in countries with higher levels of in-work at-risk-of-poverty rate have are more likely to receive envelope wages.	Franić, 2017 (EU-27)
Gini coefficient	Positive association. Countries with higher inequality have higher prevalence of envelope wages.	Kayaoglu and Williams, 2017 (EU-27); Williams, 2015 (East-Central Europe)
Inequalities in income distribution	Positive association. Countries with higher inequality have higher prevalence of envelope wages.	Franić, 2017 (EU-27/EU-28); Williams, 2014c (EU-27); Williams, 2015 (East-Central Europe); Williams and Horodnic, 2015b (East-Central Europe); Williams and Horodnic, 2017c (EU-28)
% of workers with a contract of limited duration	No relationship.	Franić, 2017 (EU-27/EU-28)
	No relationship.	Franić, 2017 (EU-27)
% of workers having two jobs	Negative association. The higher the prospects for holding two jobs the lower the propensity to work on an under-declared basis.	Franić, 2017 (EU-28)
Employment rate	Negative association. Individuals living in countries with better the employment prospects are less likely to receive envelope wages.	Franić, 2017 (EU-27/ EU-28); Williams, 2014c (EU-27)
Youth employment rate	Negative association. Individuals living in countries with better the employment	Franić, 2017 (EU-27/ EU-28)



	prospects for youth population are less likely to receive envelope wages.	
Labour productivity	The most important driver for decreasing envelope wages and accounts for three quarters of the decline of informality between 2000 and 2014. Changes in taxation level have a secondary role: no role of changing the personal taxes and non-negligible role of corporate income tax.	Di Nola et al., 2019 (Bulgaria)
<b>III. FORMAL INSTITUTIONAL POWERLESSNESS</b>		
<b><i>Lack of capacity to enforce policies</i></b>		
Rule of law	Negative association. The stronger the rule of law, the lower the prevalence of envelope wages.	Franić, 2017 (EU-27/ EU-28); Kayaoglu and Williams, 2017 (EU-27)
Perceived judicial independence	Negative association. The higher the perceived judicial independence the lower the prevalence of envelope wages.	Franić, 2017 (EU-27/EU-28)
Inspections/ Risk of detection	No relationship or weak evidence (not conclusive).	Franić, 2017 (EU-27/EU-28); Franić, 2019 (EU-28); Williams and Bezeredi, 2017 (North Macedonia); Williams and Horodnic, 2016 (EU-28); Williams and Yang, 2017 (Bulgaria); Williams et al., 2017b (Croatia)
Sanctions (for undeclared work)	No relationship or weak evidence (not conclusive).	Franić, 2017 (EU-27/EU-28); Franić, 2019 (EU-28); Williams and Bezeredi, 2017 (North Macedonia); Williams and Yang, 2017 (Bulgaria); Williams et al., 2017b (Croatia)
<b><i>Lack of power in terms of the ability to provide incentives to encourage adherence to the formal rules</i></b>		
Pension sustainability index	No relationship.	Franić, 2017 (EU-28)
<b><i>Lack of trust in authorities</i></b>		
Trust in the national government	Negative association. The higher the trust in the national government the lower the prevalence of envelope wages.	Franić, 2017 (EU-27/EU-28)
<b>B. INFORMAL INSTITUTIONS</b>		
Tax morale	Negative association. The higher the tax morale the lower the participation in envelope wages	Franić, 2017 (EU-27/ EU-28); Franić, 2019 (EU-28); Williams and Bezeredi, 2017 (North Macedonia); Williams and Horodnic, 2015b (East-Central Europe); Williams and Horodnic, 2015c (Baltic Sea countries); Williams and Horodnic, 2015d (Southern Europe); Williams and Horodnic, 2016 (EU-28); Williams and Yang, 2017 (Bulgaria)



**Table A3. Determinants of bogus self-employment**

Variable	Result	Study and coverage
<b>A. FORMAL INSTITUTIONS</b>		
<b>I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES</b>		
<b>1. Level of modernisation of government</b>		
Government effectiveness	Negative association. Countries where the government is perceived as more effective have lower rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
<b>2. Formal institutions acting in a corrupt manner</b>		
Irregular payments and bribes	Positive association. Countries where irregular payments and bribes are perceived as less common are associated with lower rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Favouritism in decisions by government officials	Positive association. Countries where favouritism in decisions by government officials is perceived as less common are associated with lower rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Diversion of public funds	Positive association. Countries where diversion of public fund is perceived as less common are associated with lower rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Transparency International's Corruption Perceptions Index (CPI)	Positive association. The higher the perceived levels of public sector corruption the higher rates of dependent self-employment	Williams and Horodnic, 2019 (35 European countries)
Control of corruption index	Negative association. Stronger governance is associated with lower rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Problematic factors for doing business: Corruption (%)	Positive association. The higher perceived levels of public sector corruption the higher rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
<b>II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES</b>		
<b>1. Modernisation Explanation - Level of 'development'</b>		
Reliability of police services	Negative association. The higher the perceived reliability of police services the lower the prevalence of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Self-employment–employment ratio	Positive association. The greater the self-employment–employment ratio in a country, the higher is the share of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
<b>2. State intervention</b>		
Regulatory system (e.g. labour law, social security law, regulations focusing on self-employment)	Essential role for the increase in dependent self-employment. Dependent self-employment represents a response to strict labour market regulations and increasing costs of social security payments for dependent employment.	Eichhorst et al., 2013 (EU-27)
Burden of government regulation	No association with dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
R&D expenditures	Higher R&D expenditures at the country level increase the quality of self-	Burke et al., 2019 (EU-28)

	employment in the country. Higher R&D expenditures increases the shares of self-employed with employees and that of opportunity self-employed and decrease the shares of dependent self-employed and necessity self-employed.	
Total tax rate (% of profits)	No association with DSE.	Williams and Horodnic, 2019 (35 European countries)
Real tax rate on gross salary	No association with DSE.	Williams and Horodnic, 2019 (35 European countries)
Employer tax burden	No association with DSE.	Williams and Horodnic, 2019 (35 European countries)
Problematic factors for doing business: Tax rates (%)	No association with DSE.	Williams and Horodnic, 2019 (35 European countries)
Labour cost index	No association with DSE.	Williams and Horodnic, 2019 (35 European countries)
Implicit tax rate on labour	No association with DSE.	Williams and Horodnic, 2019 (35 European countries)
Taxation level for self-employment	Negative association. Changes in the taxation level and the compulsoriness of paying social security contributions for self-employed provide tentative evidence of decreasing bogus self-employment (i.e., equalizing the tax incentives for employing waged employees rather than as a self-employee).	Williams and Horodnic, 2017 (Romania)
Employment/ labour protection legislation (ELP)	Negative association. Stricter ELP reduces the self-employment (i.e., contracted-out work).	Robson, 2003 (13 OECD countries)
	Positive association. Strict ELP has a positive effect on transition to dependent self-employment.	Román et al., 2011 (EU-15)
Problematic factors for doing business: Restrictive labour regulations (%)	Negative association. The more restrictive the labour regulation is perceived the lower the rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Expenditure on social protection (PPS/ inhabitant, % GDP)	Negative association. Countries with higher level of social protection have lower share of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Impact of social transfers on reducing poverty	Negative association. The more effective are social transfers in reducing poverty, the lower is the prevalence of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Public expenditure on labour market interventions	Negative association. The higher levels of state expenditure on labour market interventions the lower the prevalence of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Generosity of sickness and health benefits	Positive association. Generosity of sickness and health benefits increase the probability of transition to dependent self-employment.	Román et al., 2011 (EU-15)
Generosity of unemployment benefits	No effect on the transition to dependent self-employment.	Román et al., 2011 (EU-15)
Generosity of old age, disability and death benefits	Negative association. Generosity of old age, disability and death benefits decrease the probability of transition to dependent self-employment.	Román et al., 2011 (EU-15)
Severe material	Positive association. Countries with higher	Williams and Horodnic, 2019 (35

deprivation	proportions of the population living in severe material deprivation have larger share of dependent self-employment.	European countries)
Income quintile share ratio (S80/S20)	Positive association. Countries with higher inequalities in terms of income have larger share of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Gini coefficient	Positive association. Countries with inequality have larger share of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
<b>III. FORMAL INSTITUTIONAL POWERLESSNESS</b>		
<b><i>Lack of capacity to enforce policies</i></b>		
Rule of law	Negative association. Poor enforcement associated with larger share of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Regulatory quality	Negative association. The higher the quality of regulatory environment the lower the dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Impartiality index	Negative association. Countries where the government is perceived as more impartial have lower rates of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
<b><i>Lack of power in terms of the ability to provide incentives to encourage adherence to the formal rules</i></b>		
Fiscal incentives	Positive association. Tax subsidies for start-ups and tax reliefs stimulate the employers (who seek wage flexibility) and the workers (who seek tax deductions) to decide for self-employment instead of dependent employment.  *Public expenditure on start-up incentives (as % of GDP) has a positive effect on transition of workers from dependent employment to dependent self-employment.	Dekker et al., 2018 (the Netherlands)  *Román et al., 2011 (EU-15)
Benefit level (low protection)	Low benefit levels act as a disincentive for self-employment to make contributions.	Spasova et al., 2017
<b><i>Lack of trust in authorities</i></b>		
Trust in regional and local authorities (%)	Negative association. The higher the trust in authorities the lower the prevalence of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Trust in justice/ the legal system (%)	Negative association. The higher the trust in justice and legal system the lower the prevalence of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)
Trust in public authorities the police (%)	Negative association. The higher the trust in police the lower the prevalence of dependent self-employment.	Williams and Horodnic, 2019 (35 European countries)

**Table A4. Indicators used (description and source of data)**

Indicator	Description	Source
<b>A. FORMAL INSTITUTIONS</b>		
<b>I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES</b>		
<b>1. Level of modernisation of government</b>		
Government effectiveness	Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance.	World Bank - The Worldwide Governance Indicators (WGI), 2009-2018. Available from: <a href="https://info.worldbank.org/governance/wgi/">https://info.worldbank.org/governance/wgi/</a>
<b>2. Formal institutions acting in a corrupt manner</b>		
Corruption Perceptions Index (CPI)	Transparency International's Corruption Perceptions Index ranks countries and territories based on how corrupt their public sector is perceived to be. A country or territory's score indicates the perceived level of public sector corruption on a scale of 0 - 100, where 0 means that a country is perceived as highly corrupt and 100 means it is perceived as very clean.	Transparency International - Corruption Perceptions Index (CPI), 2009-2018. Available from: <a href="https://www.transparency.org/research/cpi">https://www.transparency.org/research/cpi</a>
Control of corruption (index)	Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests. Estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance.	World Bank - The Worldwide Governance Indicators (WGI), 2009-2018. Available from: <a href="https://info.worldbank.org/governance/wgi/">https://info.worldbank.org/governance/wgi/</a>
<b>II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES</b>		
<b>1. Modernisation Explanation - Level of 'development'</b>		
GDP (current prices, euro per capita)	Gross domestic product at market prices - current prices, euro per capita.	Eurostat - Main GDP aggregates per capita, 2009-2018. Available from: <a href="https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_pc&amp;lang=en">https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_pc&amp;lang=en</a>
Human Development Index (HDI)	The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions. HDI is ranked on a scale from 0 to 1.0, with 1.0 being the highest human development.	United Nations Development Programme, Human Development Reports, 2009-2018. Available from: <a href="http://hdr.undp.org/en/data">http://hdr.undp.org/en/data</a>
Social Progress Index (SPI)	The index doesn't measure people's happiness or life satisfaction, focusing instead on actual life outcomes in areas from shelter and nutrition to rights and education. This exclusive focus on measurable outcomes makes the	Social Progress Imperative - Social Progress Index, 2014-2018. Available from: <a href="https://www.socialprogress.org/">https://www.socialprogress.org/</a>

index a useful policy tool that tracks changes in society over time. The Social Progress Index score is an average across scores for the three broad dimensions: Basic Human Needs, Foundations of Wellbeing, and Opportunity (maximum possible score: 100). Within each dimension, there are four components that further divide the indicators into thematic categories. This diverse selection of indicators allows for granular analysis of the specific underpinnings of social progress in each country, while the broad categories of the index framework helps to better understand global and regional trends.

Self-employment (% of total employment)	Self-employed in total employment: number of self-employed as a share of total employment.	European Commission (2019) (Employment and Social Developments in Europe 2019. Luxembourg: Publications Office of the European Union), based on Eurostat, EU-LFS and DG EMPL calculations, 2014-2018. Available from: <a href="https://ec.europa.eu/social/main.jsp?catId=738&amp;langId=en&amp;pubId=8219">https://ec.europa.eu/social/main.jsp?catId=738&amp;langId=en&amp;pubId=8219</a>
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## 2. State intervention

Burden of government regulation	Response to the survey question 'In your country, how burdensome is it for companies to comply with public administration's requirements (e.g., permits, regulations, reporting)?' (1 = extremely burdensome; 7 = not burdensome at all).	World Economic Forum – Global Competitiveness Reports (The Executive Opinion Survey), 2009-2018. Available from: <a href="https://www.weforum.org/reports">https://www.weforum.org/reports</a>
Restrictive labour regulations (% of respondents)	The most problematic factor for doing business: Restrictive labour regulations (% of respondents). From a list of factors, respondents (The Executive Opinion Survey, WE Forum) were asked to select the five most problematic factors for doing business in their country/economy and to rank them between 1 (most problematic) and 5. The responses were weighted according to their rankings.	World Economic Forum – Global Competitiveness Reports (The Executive Opinion Survey), 2009-2018. Available from: <a href="https://www.weforum.org/reports">https://www.weforum.org/reports</a>
Business flexibility	Sub-index within Fraser Institute Economic Freedom Index, measuring the degree of economic freedom present in one of the five major areas, namely Regulation. When regulations restrict entry into markets and interfere with the freedom to engage in voluntary exchange, they reduce economic freedom. This major area of the index focuses on regulatory restraints that limit the freedom of exchange in credit, labor, and product markets. Measure: score out of 10.	Fraser Institute – Economic Freedom Index, 2009-2017. Available from: <a href="https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&amp;year=2017&amp;page=dataset&amp;min-year=2&amp;max-year=0&amp;filter=0">https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&amp;year=2017&amp;page=dataset&amp;min-year=2&amp;max-year=0&amp;filter=0</a>
Expense of government (% of GDP)	This indicator measures the government size (proxy of the degree of intervention). Expense is cash payments for operating activities of the government in providing goods and services. It includes compensation of employees (such as wages and salaries), interest and subsidies, grants, social benefits, and other expenses such as rent and dividends.	World Bank - World Development Indicators, 2009-2018. Available from: <a href="https://data.worldbank.org/indicator/GC.XPN.TOTL.GD.ZS">https://data.worldbank.org/indicator/GC.XPN.TOTL.GD.ZS</a>
Research & Development expenditure (% of GDP)	Research and experimental development (R&D, all sectors) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. R&D expenditure are shown as a percentage of GDP (R&D intensity).	Eurostat - R&D expenditure, 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdtdot&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdtdot&amp;lang=en</a>

Tax revenue (% of GDP)	Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.	World Bank - World Development Indicators, 2009-2018. Available from: <a href="https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS">https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS</a>
Social contributions (% of revenue)	Social contributions include social security contributions by employees, employers, and self-employed individuals, and other contributions whose source cannot be determined. They also include actual or imputed contributions to social insurance schemes operated by governments.	World Bank - World Development Indicators, 2009-2018. Available from: <a href="https://data.worldbank.org/indicator/GC.REV.SOCL.ZS">https://data.worldbank.org/indicator/GC.REV.SOCL.ZS</a>
Impact of social transfers on poverty reduction (%)	At risk of poverty rate before social transfers (pensions excluded from social transfers) (cut-off point: 60 % of median equivalised income after social transfers). Reduction in percentage of the risk of poverty rate, due to social transfers (calculated comparing at-risk-of poverty rates before social transfers with those after transfers; pensions are not considered as social transfers in these calculations). The indicator is based on the EU-SILC (statistics on income, social inclusion and living conditions).	Eurostat - Impact of social transfers (excluding pensions) on poverty reduction, 2009-2018. Available from: <a href="https://ec.europa.eu/eurostat/tgm/table.do?tab=table&amp;init=1&amp;language=en&amp;pcode=tespm050&amp;plugin=1">https://ec.europa.eu/eurostat/tgm/table.do?tab=table&amp;init=1&amp;language=en&amp;pcode=tespm050&amp;plugin=1</a>
Labour market policy (LMP) expenditure (% of GDP)	Labour market policy (LMP) interventions cover the range of financial and practical supports offered by governments to people who are unemployed or otherwise disadvantaged in the labour market.	European Commission (Directorate-General for Employment, Social Affairs and Inclusion) - LMP expenditure. Available from: <a href="https://webgate.ec.europa.eu/empl/redisstat/databrowser/view/LMP_EXPSUMM/default/table?category=lmp_expend">https://webgate.ec.europa.eu/empl/redisstat/databrowser/view/LMP_EXPSUMM/default/table?category=lmp_expend</a>
Unemployment rate (% of active population)	Unemployment rate represents unemployed persons as a percentage of the labour force. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who were: a. without work during the reference week, b. currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week, c. actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of, at most, three months.	Eurostat - Unemployment by sex and age (annual average), 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_r_t_a&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_r_t_a&amp;lang=en</a>
People at risk of poverty or social exclusion (% total population)	This indicator corresponds to the sum of persons who are: at risk of poverty after social transfers, severely materially deprived or living in households with very low work intensity. Persons are counted only once even if they are affected by more than one of these phenomena.	Eurostat - People at risk of poverty or social exclusion by age and sex, 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_peps01&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_peps01&amp;lang=en</a>
Severe material deprivation rate (% total population)	The material deprivation rate is an indicator in EU-SILC that expresses the inability to afford some items considered by most people to be desirable or even necessary to lead an adequate life. The indicator distinguishes between individuals who cannot afford a certain good or service, and those who do not have this good or service for another reason, e.g. because they do not want or do not need it. Severe material deprivation rate is defined as the enforced inability to pay for at least four of the deprivation items.	Eurostat - Severe material deprivation rate by age and sex, 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mddd11&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mddd11&amp;lang=en</a>

Inequality of income distribution (income quintile share ratio S80/S20)	The ratio of total income received by the 20 % of the population with the highest income (top quintile) to that received by the 20 % of the population with the lowest income (lowest quintile). Income must be understood as equivalised disposable income.	Eurostat - Income quintile share ratio S80/S20, 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di11&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di11&amp;lang=en</a>
Gini coefficient	The Gini coefficient (scale from 0 to 100) is defined as the relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them.	Eurostat - Gini coefficient of equivalised disposable income, 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di12&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di12&amp;lang=en</a>
Labour productivity (percentage change on previous period)	Real labour productivity per person employed. The labour productivity = GDP/ETO with GDP = Gross domestic product, chain-linked volumes reference year 2010; ETO = Total employment, all industries, in persons. Data are expressed as percentage change comparing year Y with year Y-1.	Eurostat - Labour productivity and unit labour costs. 2009-2018. Available from: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_lp_ulc&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_lp_ulc&amp;lang=en</a>
<b>III. FORMAL INSTITUTIONAL POWERLESSNESS</b>		
Reliability of police services	Response to the survey question 'In your country, to what extent can police services be relied upon to enforce law and order?' (1 = not at all; 7 = to a great extent).	World Economic Forum – Global Competitiveness Reports (The Executive Opinion Survey), 2009-2018. Available from: <a href="https://www.weforum.org/reports">https://www.weforum.org/reports</a>
Judicial independence	Response to the survey question 'In your country, how independent is the judicial system from influences of the government, individuals, or companies?' (1 = not independent at all; 7 = entirely independent).	World Economic Forum – Global Competitiveness Reports (The Executive Opinion Survey), 2009-2018. Available from: <a href="https://www.weforum.org/reports">https://www.weforum.org/reports</a>
Rule of law	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance.	World Bank - The Worldwide Governance Indicators (WGI), 2009-2018. Available from: <a href="https://info.worldbank.org/governance/wgi/">https://info.worldbank.org/governance/wgi/</a>
Regulatory quality	Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance.	World Bank - The Worldwide Governance Indicators (WGI), 2009-2018. Available from: <a href="https://info.worldbank.org/governance/wgi/">https://info.worldbank.org/governance/wgi/</a>
Voice and accountability (index)	Reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance.	World Bank - The Worldwide Governance Indicators (WGI), 2009-2018. Available from: <a href="https://info.worldbank.org/governance/wgi/">https://info.worldbank.org/governance/wgi/</a>
Trust in Government (% tend to trust)	Standard Eurobarometer question: trust in the (nationality) Government (% tend to trust).	Standard Eurobarometer surveys 72, 74, 76, 78, 80, 82, 84, 86, 88, 90 - Public opinion in the European Union, Autumn 2009-2018. Available from: <a href="https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=1&amp;instruments=STANDARD">https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=1&amp;instruments=STANDARD</a>
Trust in Parliament (% tend to trust)	Standard Eurobarometer question: trust in the (nationality) Parliament (% tend to trust).	Standard Eurobarometer surveys 72, 74, 76, 78, 80, 82, 84, 86, 88, 90 - Public opinion in the European Union, Autumn 2009-



2018. Available from:  
<https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=1&instruments=STANDARD>

#### IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY

Democracy Index	The EIU Democracy Index is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Measure: Index score out of 10, 10 being best (full democracy).	The Economist Intelligence Unit - Democracy Index, 2009-2018. Available from: <a href="https://www.eiu.com/topic/democracy-index">https://www.eiu.com/topic/democracy-index</a>
Political stability	Political stability and absence of violence measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimate of governance ranges from approximately - 2.5 (weak) to 2.5 (strong) governance performance.	World Bank - The Worldwide Governance Indicators (WGI), 2009-2018. Available from: <a href="https://info.worldbank.org/governance/wgi/">https://info.worldbank.org/governance/wgi/</a>

#### B. INFORMAL INSTITUTIONS

Social capital	Score on the Social Capital pillar of the Legatum Prosperity Index. The Social Capital pillar measures the strength of personal and social relationships, social norms, and civic participation in a country. The scale ranges from 0 (low) to 100 (high). The index is used by World Economic Forum in Global Competitiveness Reports.	Legatum Institute - The Legatum Prosperity Index (Social Capital pillar), 2009-2018. Available from: <a href="https://www.prosperity.com/about/resources">https://www.prosperity.com/about/resources</a>
Tax compliance (index)	Sub-component within Fraser Institute Economic Freedom Index, measuring the cost of tax compliance. Measure: score out of 10.	Fraser Institute - Economic Freedom Index, 2009-2017. Available from: <a href="https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&amp;year=2017&amp;page=dataset&amp;min-year=2&amp;max-year=0&amp;filter=0">https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&amp;year=2017&amp;page=dataset&amp;min-year=2&amp;max-year=0&amp;filter=0</a>
Acceptability of undeclared work (% total 'unacceptable')	<p>The acceptability of various behaviours across respondents (1 - 'absolutely unacceptable' and 10 - 'absolutely acceptable').</p> <p>Percent of total 'unacceptable' (1-4):</p> <ul style="list-style-type: none"> <li>Firm hires worker on undeclared basis (A firm hires a private person and all or a part of the salary paid to him or her is not officially declared)</li> <li>Undeclared work by firm for firm (A firm is hired by another firm and it does not declare its activity to tax or social security authorities)</li> <li>Undeclared work by individual for private household (A private person is hired by a private household and he or she does not declare the payment received to tax or social security authorities although it should be reported)</li> <li>Undeclared work by firm for private household (A firm is hired by a private household for work and does not declare the payment received to tax or social security authorities)</li> <li>Someone partially or completely conceals their income (A private person or self-employed person evades taxes by not declaring all or part of their income)</li> </ul>	Special Eurobarometer surveys 402 & 498 - Undeclared Work in the European Union, 2013 and 2019. Available from: <a href="https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=5&amp;instruments=SPECIAL">https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=5&amp;instruments=SPECIAL</a>































Personally know people engaged in undeclared work (% 'yes')

Response to the survey question 'Do you personally know any people who work without declaring all or part of their income to tax or social security authorities?' (% total 'yes').

Special Eurobarometer surveys 402 & 498 - Undeclared Work in the European Union, 2013 and 2019. Available from: <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=5&instruments=SPECIAL>





























**Table A5. Early warning signals: by country**

BELGIUM												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.57	1.58	1.66	1.60	1.61	1.38	1.44	1.33	1.18	1.17	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				75	75	76	77	77	75	75	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	1.46	1.53	1.58	1.61	1.67	1.57	1.57	1.64	1.50	1.51	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	32 090	33 330	34 060	34 770	35 210	35 950	36 960	37 980	39 240	40 240	■	■
Human Development Index (HDI) (0-1 (highest development))	0.899	0.903	0.904	0.905	0.908	0.910	0.913	0.915	0.917	0.919	■	■
Social Progress Index (SPI) (0-100 (high))						86.24	86.57	86.16	86.48	86.66	■	■
Self-employment (% of total employment)	13.5	13.4	13.2	13.5	14.2	13.7	14.3	14.0	13.6	13.2	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	2.7	2.6	2.5	2.6	2.6	2.6	2.8	3.2	3.1	3.1	■	■
Restrictive labour regulations (% of respondents)	18.6	22.1	21.5	14.6	22.2	22.5	20.9	17.4	16.1		■	■
Business flexibility index (0-10 (high))	7.73	8.12	7.85	7.87	7.74	7.87	7.88	7.88	7.99		■	■
Expense of government (% of GDP)	44.3	43.5	44.8	45.9	45.5	44.9	41.4	40.7	39.6		■	■
Research & Development expenditure (% of GDP)	2.00	2.06	2.17	2.28	2.33	2.37	2.43	2.52	2.66	2.76	■	■
Tax revenue (% of GDP)	23.8	24.5	24.9	25.8	26.2	26.1	24.3	22.8	23.3		■	■
Social contributions (% of revenue)	37.2	35.8	35.6	35.1	34.9	34.9	36.4	36.8	36.1		■	■
Impact of social transfers on poverty reduction (%)	45.32	45.32	44.96	44.77	42.59	43.64	44.19	41.06	39.54	34.66	■	■
Labour market policy (LMP) expenditure (% of GDP)	3.05	2.92	2.76	2.76	2.80	2.68	2.43	2.30	2.27		■	■
Unemployment rate (% of active population)	7.9	8.3	7.2	7.6	8.4	8.5	8.5	7.8	7.1	6.0	■	■
People at risk of poverty/social exclusion (% of total population)	20.2	20.8	21.0	21.6	20.8	21.2	21.1	20.7	20.3	19.8	■	■
Severe material deprivation rate (% of total population)	5.2	5.9	5.7	6.3	5.1	5.9	5.8	5.5	5.1	4.9	■	■
Inequality of income distribution (income quintile share ratio)	3.91	3.92	3.86	3.95	3.81	3.81	3.83	3.84	3.82	3.78	■	■
Gini coefficient (0-100 (perfect inequality))	26.4	26.6	26.3	26.5	25.9	25.9	26.2	26.3	26.0	25.6	■	■
Labour productivity (% change on previous period)	-1.9	2.2	0.4	0.3	0.8	1.2	1.1	0.3	0.3	0.1	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.7	5.6	5.6	5.7	5.6	5.7	5.7	5.9	5.6	5.6			
Judicial independence (1-7 (best))	5.4	5.2	5.3	5.2	5.4	5.7	5.8	5.7	5.6	5.7			
Rule of law (-2.5 to 2.5 (strong performance))	1.38	1.39	1.42	1.43	1.44	1.52	1.46	1.39	1.34	1.37			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.31	1.29	1.24	1.23	1.29	1.16	1.29	1.34	1.24	1.23			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.35	1.36	1.33	1.35	1.37	1.37	1.39	1.38	1.38	1.40			
Trust in Government (% tend to trust)	36	29	34	38	48	33	39	41	47	49			
Trust in Parliament (% tend to trust)	38	36	42	40	48	36	42	43	51	54			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.05	8.05	8.05	8.05	7.93	7.93	7.77	7.78	7.78			
Political stability (-2.5 to 2.5 (strong performance))	0.82	0.81	0.95	0.92	0.94	0.70	0.59	0.44	0.43	0.41			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	58.4	58.0	57.0	56.5	55.1	57.7	59.5	59.5	58.8	60.3			
Tax compliance (0-10 (high))	8.25	8.25	8.25	8.21	8.21	8.03	8.20	8.48	8.48				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					79				74				
Undeclared work by firm for firm					85				83				
Undeclared work by individual for private household					60				53				
Undeclared work by firm for private household					79				77				
Someone partially or completely conceals their income					79				63				
Personally know people engaged in undeclared work (% 'yes')					40				41				





























## BULGARIA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.17	0.11	0.11	0.14	0.16	0.08	0.21	0.30	0.26	0.27	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				41	41	43	41	41	43	42	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	-0.21	-0.19	-0.22	-0.23	-0.27	-0.25	-0.26	-0.17	-0.16	-0.15	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	4 930	5 050	5 610	5 750	5 770	5 940	6 360	6 820	7 390	7 980	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.774	0.779	0.782	0.786	0.792	0.797	0.807	0.812	0.813	0.816	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						73.24	73.68	74.01	75.37	75.66	<div></div>	<div></div>
Self-employment (% of total employment)	11.5	11.5	11.1	10.8	11.5	11.8	11.4	11.1	11.1	10.9	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	3.1	3.2	3.1	3.0	3.1	3.1	3.2	3.5	3.3	3.4	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	2.3	2.4	3.3	4.7	4.5	5.4	6.0	5.6	4.3		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.72	7.72	7.87	7.93	7.81	7.64	7.58	7.61	7.74		<div></div>	<div></div>
Expense of government (% of GDP)	33.9	31.6	29.9	31.1	33.1	38.0	34.8	32.4	32.3		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	0.49	0.57	0.53	0.60	0.64	0.79	0.95	0.77	0.74	0.75	<div></div>	<div></div>
Tax revenue (% of GDP)	19.0	18.5	17.7	19.0	19.9	19.5	20.2	20.0	20.1		<div></div>	<div></div>
Social contributions (% of revenue)	22.2	21.8	23.1	21.8	22.6	23.6	23.0	24.2	25.5		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	17.42	23.62	18.98	18.15	21.35	20.15	22.54	17.92	19.86	25.42	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	0.56	0.53	0.54	0.64	0.79	0.61	0.55	0.55	0.54		<div></div>	<div></div>
Unemployment rate (% of active population)	6.8	10.3	11.3	12.3	13.0	11.4	9.2	7.6	6.2	5.2	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	46.2	49.2	49.1	49.3	48.0	40.1	41.3	40.4	38.9	32.8	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	41.9	45.7	43.6	44.1	43.0	33.1	34.2	31.9	30.0	20.9	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	5.91	5.86	6.46	6.12	6.59	6.81	7.11	7.69	8.23	7.66	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	33.4	33.2	35.0	33.6	35.4	35.4	37.0	37.7	40.2	39.6	<div></div>	<div></div>
Labour productivity (% change on previous period)	-1.7	4.6	4.7	2.9	0.8	1.5	3.6	3.3	1.7	3.2	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	3.0	3.3	3.4	3.4	3.4	3.3	3.3	3.5	3.6	3.7			
Judicial independence (1-7 (best))	2.9	3.0	2.9	2.9	2.6	2.3	2.7	3.0	3.0	3.2			
Rule of law (-2.5 to 2.5 (strong performance))	-0.04	-0.07	-0.11	-0.09	-0.10	-0.05	-0.10	-0.06	-0.04	-0.03			
Regulatory quality (-2.5 to 2.5 (strong performance))	0.67	0.65	0.54	0.56	0.54	0.57	0.56	0.66	0.63	0.58			
Voice and accountability (-2.5 to 2.5 (strong performance))	0.56	0.53	0.45	0.40	0.34	0.37	0.43	0.40	0.38	0.32			
Trust in Government (% tend to trust)	44	34	38	25	20	19	23	22	29	22			
Trust in Parliament (% tend to trust)	27	20	25	18	14	14	14	15	17	13			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		6.84	6.78	6.72	6.83	6.73	7.14	7.01	7.03	7.03			
Political stability (-2.5 to 2.5 (strong performance))	0.35	0.36	0.30	0.38	0.17	0.08	0.02	0.08	0.33	0.42			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	39.9	40.7	41.7	41.5	43.0	40.8	43.0	44.0	44.7	48.5			
Tax compliance (0-10 (high))	3.10	4.40	4.91	4.91	4.91	5.26	4.92	4.92	4.92				
Year:					2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					82				75				
Undeclared work by firm for firm					83				77				
Undeclared work by individual for private household					60				61				
Undeclared work by firm for private household					81				76				
Someone partially or completely conceals their income					80				69				
Personally know people engaged in undeclared work (% 'yes')					33				38				





























## CZECHIA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.88	0.91	0.93	0.93	0.89	1.02	1.05	1.04	1.01	0.92	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				49	48	51	56	55	57	59	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	0.39	0.33	0.34	0.27	0.23	0.37	0.43	0.54	0.57	0.50	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	14 170	14 900	15 630	15 360	15 010	14 880	15 980	16 690	18 100	19 530	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.857	0.862	0.865	0.865	0.874	0.879	0.882	0.885	0.888	0.891	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						82.29	82.42	83.24	84.37	84.06	<div></div>	<div></div>
Self-employment (% of total employment)	16.2	17.1	17.5	17.8	16.9	17.4	16.7	16.6	16.7	16.5	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.7	2.7	2.6	2.7	2.6	2.6	2.8	2.8	2.6	2.8	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	6.9	7.2	8.2	7.6	10.5	9.0	7.6	7.0	8.3		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.39	7.62	7.77	8.02	7.99	7.96	8.19	8.09	8.19		<div></div>	<div></div>
Expense of government (% of GDP)	35.3	35.2	35.2	36.8	35.1	34.7	33.4	33.0	32.1		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	1.29	1.34	1.56	1.78	1.90	1.97	1.93	1.68	1.79	1.93	<div></div>	<div></div>
Tax revenue (% of GDP)	13.4	13.4	14.3	14.7	14.9	14.2	14.6	14.7	14.9		<div></div>	<div></div>
Social contributions (% of revenue)	46.1	46.4	45.3	45.4	45.1	45.9	44.3	45.6	46.3		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	51.96	50.28	45.56	45.45	48.19	43.60	42.26	40.49	42.41	38.46	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	0.68	0.67	0.53	0.47	0.54	0.59	0.61	0.54	0.47	0.46	<div></div>	<div></div>
Unemployment rate (% of active population)	6.7	7.3	6.7	7.0	7.0	6.1	5.1	4.0	2.9	2.2	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	14.0	14.4	15.3	15.4	14.6	14.8	14.0	13.3	12.2	12.2	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	6.1	6.2	6.1	6.6	6.6	6.7	5.6	4.8	3.7	2.8	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	3.47	3.47	3.54	3.49	3.40	3.50	3.51	3.50	3.40	3.32	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	25.1	24.9	25.2	24.9	24.6	25.1	25.0	25.1	24.5	24.0	<div></div>	<div></div>
Labour productivity (% change on previous period)	-3.1	3.3	2.1	-1.2	-0.8	2.2	3.8	0.8	2.8	1.5	<div></div>	<div></div>





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	3.9	3.8	3.6	3.8	3.9	4.1	4.1	4.5	4.8	4.9			
Judicial independence (1-7 (best))	4.0	4.0	3.7	3.7	3.8	3.9	4.3	4.4	4.5	4.6			
Rule of law (-2.5 to 2.5 (strong performance))	0.96	0.95	1.04	1.04	1.04	1.15	1.15	1.04	1.12	1.05			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.31	1.30	1.20	1.06	1.09	1.01	1.10	0.99	1.23	1.26			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.03	1.01	1.02	0.97	0.98	1.03	1.04	1.02	0.97	0.93			
Trust in Government (% tend to trust)	37	26	15	11	16	30	29	28	22	28			
Trust in Parliament (% tend to trust)	15	17	11	9	12	17	17	20	17	16			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.19	8.19	8.19	8.06	7.94	7.94	7.82	7.62	7.69			
Political stability (-2.5 to 2.5 (strong performance))	0.91	0.99	1.11	1.05	1.08	0.99	0.98	0.98	1.00	1.04			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	44.8	48.2	46.3	46.8	45.4	44.6	44.1	48.4	51.4	49.3			
Tax compliance (0-10 (high))	3.76	3.76	5.37	5.37	5.37	5.46	7.38	7.22	7.42				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					66				66				
Undeclared work by firm for firm					72				70				
Undeclared work by individual for private household					49				48				
Undeclared work by firm for private household					68				65				
Someone partially or completely conceals their income					69				62				
Personally know people engaged in undeclared work (% 'yes')					33				38				



DENMARK												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	2.23	2.10	2.10	1.98	1.99	1.82	1.85	1.88	1.80	1.87	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				90	91	92	91	90	88	88	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	2.45	2.36	2.40	2.38	2.40	2.25	2.21	2.23	2.19	2.15	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	41 880	43 840	44 500	45 530	46 100	47 090	48 050	49 420	50 700	52 010	■	■
Human Development Index (HDI) (0-1 (highest development))	0.906	0.910	0.922	0.924	0.926	0.928	0.926	0.928	0.929	0.930	■	■
Social Progress Index (SPI) (0-100 (high))						88.68	88.85	88.92	89.74	89.55	■	■
Self-employment (% of total employment)	9.0	8.8	8.9	8.9	8.8	8.7	8.4	8.3	7.8	7.7	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	3.8	3.8	4.0	3.4	3.2	3.4	3.3	3.3	3.5	3.6	■	■
Restrictive labour regulations (% of respondents)	9.8	7.6	8.4	11.3	11.6	10.8	11.6	14.3	10.3		■	■
Business flexibility index (0-10 (high))	8.46	8.47	8.37	8.24	8.43	8.44	8.35	8.32	8.37		■	■
Expense of government (% of GDP)	41.9	42.3	42.4	43.5	41.4	40.9	40.4	38.4	37.6		■	■
Research & Development expenditure (% of GDP)	3.06	2.92	2.94	2.98	2.97	2.91	3.06	3.09	3.05	3.03	■	■
Tax revenue (% of GDP)	33.2	32.7	32.8	33.4	33.8	36.5	33.9	33.3	33.4		■	■
Social contributions (% of revenue)	3.0	3.0	3.0	2.7	2.4	2.2	2.3	2.3	2.2		■	■
Impact of social transfers on poverty reduction (%)	58.01	54.30	56.63	56.20	57.19	55.02	52.71	52.21	50.99	47.30	■	■
Labour market policy (LMP) expenditure (% of GDP)	3.14	3.62	3.49	3.46	3.44	3.31	3.20	3.04	2.94	2.80	■	■
Unemployment rate (% of active population)	6.4	7.7	7.8	7.8	7.4	6.9	6.3	6.0	5.8	5.1	■	■
People at risk of poverty/social exclusion (% of total population)	17.6	18.3	17.6	17.5	18.3	17.9	17.7	16.8	17.2	17.4	■	■
Severe material deprivation rate (% of total population)	2.3	2.7	2.3	2.7	3.6	3.2	3.7	2.6	3.1	3.4	■	■
Inequality of income distribution (income quintile share ratio)	4.61	4.41	3.98	3.94	4.01	4.12	4.08	4.06	4.08	4.11	■	■
Gini coefficient (0-100 (perfect inequality))	26.9	26.9	26.6	26.5	26.8	27.7	27.4	27.7	27.6	27.8	■	■
Labour productivity (% change on previous period)	-1.8	4.3	1.4	0.9	0.9	0.7	1.0	1.5	0.4	1.0	■	■





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	6.5	6.2	6.3	6.2	6.1	6.0	6.0	6.0	5.8	5.6			
Judicial independence (1-7 (best))	6.5	6.4	6.6	6.0	6.2	6.5	6.3	6.2	6.1	6.1			
Rule of law (-2.5 to 2.5 (strong performance))	1.92	1.90	1.92	1.87	1.90	2.10	2.04	1.91	1.86	1.83			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.88	1.88	1.91	1.81	1.81	1.69	1.73	1.58	1.62	1.68			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.54	1.54	1.55	1.67	1.67	1.52	1.55	1.54	1.52	1.61			
Trust in Government (% tend to trust)	57	39	42	42	40	50	47	46	55	52			
Trust in Parliament (% tend to trust)	74	66	64	63	58	61	60	58	64	61			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		9.52	9.52	9.52	9.38	9.11	9.11	9.20	9.22	9.22			
Political stability (-2.5 to 2.5 (strong performance))	1.00	1.04	1.10	0.91	0.96	0.95	0.90	0.87	0.87	0.96			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	80.5	79.9	80.1	80.0	76.9	78.6	76.4	78.5	78.6	80.5			
Tax compliance (0-10 (high))	8.49	8.49	8.54	8.54	8.54	8.54	8.54	8.54	8.52				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					91				87				
Undeclared work by firm for firm					93				89				
Undeclared work by individual for private household					62				60				
Undeclared work by firm for private household					91				87				
Someone partially or completely conceals their income					91				83				
Personally know people engaged in undeclared work (% 'yes')					59				55				

GERMANY												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.58	1.57	1.55	1.59	1.54	1.73	1.74	1.73	1.72	1.62	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				79	78	79	81	81	81	80	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	1.76	1.78	1.74	1.83	1.81	1.84	1.84	1.84	1.84	1.95	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	30 390	31 940	33 550	34 130	34 860	36 150	37 090	38 060	39 260	40 340	■	■
Human Development Index (HDI) (0-1 (highest development))	0.916	0.920	0.925	0.927	0.927	0.930	0.933	0.936	0.938	0.939	■	■
Social Progress Index (SPI) (0-100 (high))						87.89	88.06	88.41	88.49	88.54	■	■
Self-employment (% of total employment)	11.0	11.0	11.1	11.0	10.7	10.5	10.4	10.0	9.8	9.6	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	3.0	3.0	3.0	3.4	3.6	3.6	3.9	4.3	4.8	4.8	■	■
Restrictive labour regulations (% of respondents)	19.6	17.4	20.7	16.7	15.6	17.8	14.4	10.6	10.5		■	■
Business flexibility index (0-10 (high))	6.68	7.02	7.49	7.58	7.58	7.39	7.85	7.99	8.00		■	■
Expense of government (% of GDP)	31.0	31.3	28.8	28.4	28.7	28.0	27.9	27.8	28.2		■	■
Research & Development expenditure (% of GDP)	2.74	2.73	2.81	2.88	2.84	2.88	2.93	2.94	3.07	3.13	■	■
Tax revenue (% of GDP)	11.6	11.2	11.5	11.6	11.6	11.5	11.4	11.3	11.5		■	■
Social contributions (% of revenue)	55.4	55.7	54.5	54.6	54.7	54.6	55.0	55.6	55.8		■	■
Impact of social transfers on poverty reduction (%)	35.68	35.54	37.05	33.74	34.02	33.20	33.47	34.78	33.20	33.33	■	■
Labour market policy (LMP) expenditure (% of GDP)	2.45	2.18	1.76	1.62	1.64	1.58	1.51	1.44	1.41	1.37	■	■
Unemployment rate (% of active population)	7.6	7.0	5.8	5.4	5.2	5.0	4.6	4.1	3.8	3.4	■	■
People at risk of poverty/social exclusion (% of total population)	20.0	19.7	19.9	19.6	20.3	20.6	20.0	19.7	19.0	18.7	■	■
Severe material deprivation rate (% of total population)	5.4	4.5	5.3	4.9	5.4	5.0	4.4	3.7	3.4	3.1	■	■
Inequality of income distribution (income quintile share ratio)	4.48	4.49	4.46	4.30	4.60	5.12	4.80	4.62	4.49	5.07	■	■
Gini coefficient (0-100 (perfect inequality))	29.1	29.3	29.0	28.3	29.7	30.7	30.1	29.5	29.1	31.1	■	■
Labour productivity (% change on previous period)	-5.8	3.8	2.7	-0.7	-0.4	1.3	0.8	1.0	1.1	0.2	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	6.2	6.2	5.9	5.9	6.0	5.9	5.9	5.3	5.3	5.3			
Judicial independence (1-7 (best))	6.4	6.4	6.3	6.2	6.0	5.9	5.8	5.6	5.5	5.4			
Rule of law (-2.5 to 2.5 (strong performance))	1.66	1.63	1.62	1.66	1.65	1.86	1.79	1.62	1.61	1.63			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.52	1.57	1.55	1.54	1.55	1.70	1.72	1.82	1.78	1.75			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.33	1.30	1.35	1.39	1.41	1.44	1.42	1.36	1.39	1.42			
Trust in Government (% tend to trust)	40	32	32	41	38	48	38	51	54	54			
Trust in Parliament (% tend to trust)	45	40	42	46	44	49	42	55	58	58			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.38	8.34	8.34	8.31	8.64	8.64	8.63	8.61	8.68			
Political stability (-2.5 to 2.5 (strong performance))	0.86	0.80	0.84	0.78	0.93	0.93	0.70	0.68	0.59	0.60			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	65.9	64.4	65.1	63.7	64.6	65.2	68.7	69.1	67.2	68.5			
Tax compliance (0-10 (high))	7.59	7.52	7.68	7.56	7.56	7.56	7.56	7.56	7.56				
Year:					2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					90				91				
Undeclared work by firm for firm					93				92				
Undeclared work by individual for private household					62				67				
Undeclared work by firm for private household					88				87				
Someone partially or completely conceals their income					86				86				
Personally know people engaged in undeclared work (% 'yes')					27				28				

## ESTONIA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.01	1.09	1.08	0.95	0.97	1.02	1.07	1.09	1.11	1.19	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				64	68	69	70	70	71	73	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	1.01	1.00	1.05	1.10	1.19	1.30	1.29	1.27	1.24	1.51	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	10 640	11 150	12 650	13 620	14 420	15 340	15 820	16 490	18 070	19 740	■	■
Human Development Index (HDI) (0-1 (highest development))	0.838	0.844	0.853	0.859	0.863	0.865	0.871	0.875	0.879	0.882	■	■
Social Progress Index (SPI) (0-100 (high))						81.98	82.31	82.55	82.96	83.03	■	■
Self-employment (% of total employment)	8.2	8.3	8.5	8.6	8.9	8.9	9.2	9.4	10.0	10.5	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	4.5	4.4	4.3	4.3	4.3	4.3	4.0	4.1	4.1	4.0	■	■
Restrictive labour regulations (% of respondents)	9.6	6.0	4.8	2.2	6.2	6.6	4.4	8.5	5.6		■	■
Business flexibility index (0-10 (high))	7.78	8.00	8.10	8.17	8.24	8.07	8.20	8.20	8.20		■	■
Expense of government (% of GDP)	40.4	37.5	34.2	33.7	33.8	33.6	35.9	36.4	35.0		■	■
Research & Development expenditure (% of GDP)	1.39	1.57	2.28	2.11	1.71	1.42	1.46	1.25	1.28	1.40	■	■
Tax revenue (% of GDP)	21.4	19.7	19.1	19.8	20.0	20.6	21.5	21.8	21.0		■	■
Social contributions (% of revenue)	31.7	34.2	32.9	31.3	31.5	30.7	30.3	31.0	31.3		■	■
Impact of social transfers on poverty reduction (%)	23.94	36.55	29.72	29.44	26.77	23.24	22.30	24.91	27.34	26.76	■	■
Labour market policy (LMP) expenditure (% of GDP)	1.58	1.07	0.70	0.71	0.67	0.58	0.63	0.74	0.80	0.88	■	■
Unemployment rate (% of active population)	13.5	16.7	12.3	10.0	8.6	7.4	6.2	6.8	5.8	5.4	■	■
People at risk of poverty/social exclusion (% of total population)	23.4	21.7	23.1	23.4	23.5	26.0	24.2	24.4	23.4	24.4	■	■
Severe material deprivation rate (% of total population)	6.2	9.0	8.7	9.4	7.6	6.2	4.5	4.7	4.1	3.8	■	■
Inequality of income distribution (income quintile share ratio)	5.01	5.01	5.35	5.41	5.54	6.48	6.21	5.56	5.42	5.07	■	■
Gini coefficient (0-100 (perfect inequality))	31.4	31.3	31.9	32.5	32.9	35.6	34.8	32.7	31.6	30.6	■	■
Labour productivity (% change on previous period)	-4.7	8.0	0.8	1.5	0.1	2.2	-1.0	2.3	3.0	3.5	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.5	5.4	5.5	5.5	5.3	5.3	5.3	6.1	6.0	6.0			
Judicial independence (1-7 (best))	5.5	5.5	5.5	5.5	5.5	5.7	5.7	5.7	5.7	5.5			
Rule of law (-2.5 to 2.5 (strong performance))	1.13	1.16	1.18	1.16	1.20	1.37	1.33	1.23	1.28	1.24			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.40	1.39	1.39	1.42	1.45	1.68	1.67	1.70	1.64	1.56			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.09	1.11	1.13	1.11	1.12	1.17	1.19	1.21	1.21	1.21			
Trust in Government (% tend to trust)	47	55	49	35	38	51	43	37	57	54			
Trust in Parliament (% tend to trust)	38	39	40	29	35	39	35	34	46	44			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.68	7.61	7.61	7.61	7.74	7.85	7.85	7.79	7.97			
Political stability (-2.5 to 2.5 (strong performance))	0.57	0.66	0.61	0.64	0.75	0.78	0.62	0.67	0.65	0.60			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	51.7	49.6	49.7	55.8	53.1	53.4	54.6	55.5	57.8	57.5			
Tax compliance (0-10 (high))	9.09	9.05	9.05	9.09	9.09	9.09	9.06	9.44	9.44				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					74				78				
Undeclared work by firm for firm					82				82				
Undeclared work by individual for private household					38				39				
Undeclared work by firm for private household					77				73				
Someone partially or completely conceals their income					74				73				
Personally know people engaged in undeclared work (% 'yes')					33				27				

IRELAND												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.34	1.35	1.46	1.55	1.49	1.60	1.53	1.33	1.29	1.42	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				69	72	74	75	73	74	73	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	1.76	1.69	1.56	1.46	1.54	1.60	1.62	1.58	1.55	1.55	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	37 470	36 790	37 310	38 090	38 890	41 870	55 970	57 210	61 870	66 670	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.896	0.890	0.894	0.899	0.908	0.920	0.926	0.936	0.939	0.942	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						86.37	86.57	87.03	87.31	88.01	<div></div>	<div></div>
Self-employment (% of total employment)	16.6	16.3	16.1	16.0	16.2	16.0	15.7	15.4	14.8	14.5	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	3.1	3.1	3.4	3.8	3.9	4.0	4.3	4.7	4.1	3.9	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	10.9	9.9	9.8	10.4	6.5	8.7	5.2	4.2	7.0		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.18	7.34	7.70	8.06	8.09	8.16	8.62	8.47	8.39		<div></div>	<div></div>
Expense of government (% of GDP)	43.9	62.2	44.0	39.5	37.9	34.9	27.1	25.7	24.2	23.3	<div></div>	<div></div>
Research & Development expenditure (% of GDP)	1.61	1.59	1.56	1.56	1.57	1.50	1.19	1.19	1.23	1.15	<div></div>	<div></div>
Tax revenue (% of GDP)	22.0	21.8	22.0	22.5	22.9	23.1	18.8	18.9	18.3	18.3	<div></div>	<div></div>
Social contributions (% of revenue)	19.0	17.8	18.5	17.1	17.4	17.1	16.5	16.9	17.1	16.9	<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	60.00	61.90	61.62	58.63	59.01	55.80	55.49	51.45	52.58	51.78	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	3.26	2.62	3.33	3.23	2.95	2.53	1.74	1.50	1.22		<div></div>	<div></div>
Unemployment rate (% of active population)	12.6	14.6	15.4	15.5	13.8	11.9	10.0	8.4	6.7	5.8	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	25.7	27.3	29.4	30.1	29.9	27.7	26.2	24.4	22.7	21.1	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	6.1	5.7	7.8	9.9	9.9	8.4	7.5	6.7	5.2	4.9	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	4.24	4.70	4.63	4.82	4.73	4.89	4.50	4.45	4.63	4.23	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	28.8	30.7	29.8	30.4	30.7	31.1	29.7	29.6	30.6	28.9	<div></div>	<div></div>
Labour productivity (% change on previous period)	3.0	6.1	2.6	0.8	-1.6	5.7	20.8	0.0	5.0	4.8	<div></div>	<div></div>



III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.9	6.0	6.0	6.0	6.1	6.1	6.1	6.1	5.8	5.7	<div></div>	<div></div>	
Judicial independence (1-7 (best))	6.3	6.2	6.3	6.3	6.4	6.3	6.3	6.4	6.3	6.0	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	1.75	1.77	1.76	1.73	1.73	1.78	1.77	1.52	1.43	1.46	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	1.70	1.62	1.60	1.57	1.58	1.76	1.82	1.74	1.59	1.60	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	1.35	1.32	1.31	1.32	1.31	1.32	1.33	1.29	1.29	1.32	<div></div>	<div></div>	
Trust in Government (% tend to trust)	15	10	22	18	17	23	26	40	45	41	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	19	12	21	18	18	23	27	40	43	41	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.79	8.56	8.56	8.68	8.72	8.85	9.15	9.15	9.15	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	1.06	1.02	0.95	0.94	0.90	1.05	0.91	0.85	1.00	1.03	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	70.3	66.8	69.1	69.8	67.5	68.3	68.9	68.4	69.0	70.0	<div></div>	<div></div>	
Tax compliance (0-10 (high))	9.15	9.15	9.10	9.10	9.10	9.08	9.08	9.08	9.08		<div></div>	<div></div>	
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					80				77				<div></div>
Undeclared work by firm for firm					82				81				<div></div>
Undeclared work by individual for private household					68				64				<div></div>
Undeclared work by firm for private household					78				79				<div></div>
Someone partially or completely conceals their income					75				73				<div></div>
Personally know people engaged in undeclared work (% 'yes')					25				26				<div></div>





























GREECE												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.62	0.56	0.51	0.32	0.46	0.40	0.26	0.23	0.31	0.34	🔴	🟢
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				36	40	43	46	44	48	45	🟢	🟡
Control of corruption (-2.5 to 2.5 (strong performance))	0.07	-0.06	-0.10	-0.19	-0.05	-0.12	-0.08	-0.09	-0.14	-0.07	🔴	🟡
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	21 390	20 320	18 640	17 310	16 480	16 400	16 380	16 380	16 760	17 210	🔴	🟢
Human Development Index (HDI) (0-1 (highest development))	0.859	0.857	0.853	0.856	0.858	0.866	0.868	0.866	0.871	0.872	🟢	🟢
Social Progress Index (SPI) (0-100 (high))						81.10	81.57	81.93	80.98	81.47	🟢	🟡
Self-employment (% of total employment)	29.4	29.9	30.7	31.6	32.1	31.3	30.6	30.2	30.1	29.8	🔴	🟢
2. State intervention												
Burden of government regulation (1-7 (best))	2.4	2.4	2.3	2.2	2.2	2.4	2.4	2.4	2.3	2.3	🔴	🔴
Restrictive labour regulations (% of respondents)	14.2	12.0	8.2	5.7	5.2	4.1	5.4	3.5	1.2		🔴	🔴
Business flexibility index (0-10 (high))	5.39	5.59	5.81	5.94	6.84	6.71	6.62	6.66	7.17		🟢	🟢
Expense of government (% of GDP)	51.3	50.5	53.8	55.3	59.9	48.5	51.0	47.8	46.8	46.6	🔴	🔴
Research & Development expenditure (% of GDP)	0.63	0.60	0.67	0.70	0.81	0.83	0.96	0.99	1.13	1.18	🟢	🟢
Tax revenue (% of GDP)	19.8	20.2	22.1	23.9	24.0	24.6	24.8	26.3	26.0	26.2	🟢	🟡
Social contributions (% of revenue)	33.0	33.1	31.2	31.0	28.8	30.1	30.1	29.7	31.2	31.0	🔴	🟡
Impact of social transfers on poverty reduction (%)	13.22	15.55	13.71	13.81	17.50	15.00	16.08	15.87	15.83	20.26	🟢	🟡
Labour market policy (LMP) expenditure (% of GDP)	0.90	0.95		0.93	0.85	0.80	0.70	0.69	0.68		🔴	🔴
Unemployment rate (% of active population)	9.6	12.7	17.9	24.5	27.5	26.5	24.9	23.6	21.5	19.3	🔴	🟢
People at risk of poverty/social exclusion (% of total population)	27.6	27.7	31.0	34.6	35.7	36.0	35.7	35.6	34.8	31.8	🔴	🟢
Severe material deprivation rate (% of total population)	11.0	11.6	15.2	19.5	20.3	21.5	22.2	22.4	21.1	16.7	🔴	🟢
Inequality of income distribution (income quintile share ratio)	5.76	5.61	5.96	6.63	6.60	6.46	6.51	6.55	6.11	5.51	🟢	🟢
Gini coefficient (0-100 (perfect inequality))	33.1	32.9	33.5	34.3	34.4	34.5	34.2	34.3	33.4	32.3	🟢	🟢
Labour productivity (% change on previous period)	-3.8	-3.0	-2.4	-1.1	-0.6	-0.2	-1.2	-0.7	0.0	0.2	🟢	🟢

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	3.9	3.7	4.0	3.9	4.0	4.4	4.4	4.7	4.4	4.2	<div></div>	<div></div>	
Judicial independence (1-7 (best))	3.7	3.5	3.3	3.1	3.4	3.7	3.8	3.9	3.8	3.6	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	0.65	0.63	0.57	0.43	0.47	0.36	0.27	0.11	0.08	0.15	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	0.84	0.64	0.50	0.53	0.63	0.33	0.41	0.15	0.24	0.30	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	0.89	0.90	0.82	0.70	0.69	0.62	0.65	0.67	0.71	0.86	<div></div>	<div></div>	
Trust in Government (% tend to trust)	44	21	8	7	10	11	16	9	11	14	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	47	24	12	9	12	14	15	12	13	15	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.92	7.65	7.65	7.65	7.45	7.45	7.23	7.29	7.29	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	-0.21	-0.13	-0.10	-0.22	-0.17	-0.14	-0.23	-0.12	-0.07	0.09	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	46.3	46.0	43.9	43.5	42.8	42.4	46.1	48.7	47.8	43.2	<div></div>	<div></div>	
Tax compliance (0-10 (high))	7.49	7.49	7.74	7.84	7.84	7.84	7.84	7.84	7.84		<div></div>	<div></div>	
Year:					2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					91				93				<div></div>
Undeclared work by firm for firm					93				94				<div></div>
Undeclared work by individual for private household					82				82				<div></div>
Undeclared work by firm for private household					92				92				<div></div>
Someone partially or completely conceals their income					89				86				<div></div>
Personally know people engaged in undeclared work (% 'yes')					54				59				<div></div>

SPAIN												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.95	0.99	1.03	1.12	1.15	1.16	1.17	1.12	1.03	1.00	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				65	59	60	58	58	57	58	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	1.06	1.08	1.10	1.13	0.90	0.63	0.58	0.52	0.49	0.61	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	23 060	23 040	22 760	22 050	21 900	22 220	23 220	23 980	24 970	25 730	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.858	0.865	0.870	0.873	0.875	0.880	0.885	0.888	0.891	0.893	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						85.64	85.97	86.36	86.71	86.68	<div></div>	<div></div>
Self-employment (% of total employment)	15.9	15.9	15.6	16.6	17.2	17.0	16.7	16.5	16.0	15.6	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.7	2.8	2.8	2.8	2.8	2.8	2.7	2.8	2.8	2.7	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	19.7	21.6	18.3	16.1	14.0	14.4	14.7	13.2	13.5		<div></div>	<div></div>
Business flexibility index (0-10 (high))	6.55	6.92	7.26	6.88	6.98	7.08	7.34	7.43	7.46		<div></div>	<div></div>
Expense of government (% of GDP)	21.6	19.9	19.8	25.8	22.7	21.9	20.6	19.8	18.8		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	1.36	1.36	1.33	1.30	1.28	1.24	1.22	1.19	1.21	1.24	<div></div>	<div></div>
Tax revenue (% of GDP)	11.1	13.1	12.5	12.3	14.1	14.3	14.5	13.9	13.9		<div></div>	<div></div>
Social contributions (% of revenue)	8.0	6.8	6.5	6.0	5.8	5.7	5.5	5.5	5.2		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	24.16	28.13	31.33	28.52	32.00	28.62	26.58	24.41	23.94	22.94	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	3.68	3.88	3.69	3.78	3.51	3.10	2.57	2.29	2.19		<div></div>	<div></div>
Unemployment rate (% of active population)	17.9	19.9	21.4	24.8	26.1	24.5	22.1	19.6	17.2	15.3	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	24.7	26.1	26.7	27.2	27.3	29.2	28.6	27.9	26.6	26.1	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	4.5	4.9	4.5	5.8	6.2	7.1	6.4	5.8	5.1	5.4	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	5.87	6.16	6.28	6.47	6.29	6.81	6.87	6.60	6.59	6.03	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	32.9	33.5	34.0	34.2	33.7	34.7	34.6	34.5	34.1	33.2	<div></div>	<div></div>
Labour productivity (% change on previous period)	2.7	1.9	1.8	1.1	1.0	0.3	1.0	0.9	0.2	0.1	<div></div>	<div></div>





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.7	5.7	5.8	6.0	5.9	5.8	5.8	6.2	6.2	6.1	<div></div>	<div></div>	
Judicial independence (1-7 (best))	4.1	3.8	3.9	4.0	3.7	3.2	3.5	4.0	4.2	4.1	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	1.16	1.19	1.20	1.06	1.02	0.95	0.90	0.98	1.01	0.97	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	1.19	1.16	1.07	0.95	0.94	0.75	0.81	1.01	0.94	0.95	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	1.18	1.12	1.09	1.06	0.99	0.99	1.04	1.04	1.03	1.06	<div></div>	<div></div>	
Trust in Government (% tend to trust)	29	21	16	11	9	11	14	20	22	19	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	29	22	19	9	8	10	11	17	21	15	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.16	8.02	8.02	8.02	8.05	8.30	8.30	8.08	8.08	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	-0.47	-0.32	0.02	-0.03	0.01	0.24	0.25	0.41	0.28	0.25	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	61.1	56.8	57.9	57.4	57.8	55.5	57.1	56.9	57.4	59.9	<div></div>	<div></div>	
Tax compliance (0-10 (high))	7.79	7.90	8.13	8.13	8.13	8.23	8.30	8.30	8.35		<div></div>	<div></div>	
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					88					90			<div></div>
Undeclared work by firm for firm					92					91			<div></div>
Undeclared work by individual for private household					72					78			<div></div>
Undeclared work by firm for private household					87					90			<div></div>
Someone partially or completely conceals their income					91					86			<div></div>
Personally know people engaged in undeclared work (% 'yes')					33					41			<div></div>

FRANCE												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.48	1.43	1.36	1.34	1.48	1.40	1.44	1.41	1.35	1.48	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				71	71	69	70	69	70	72	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	1.44	1.47	1.53	1.46	1.33	1.31	1.31	1.40	1.26	1.32	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	29 930	30 690	31 510	31 820	32 080	32 420	33 020	33 430	34 220	34 980	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.869	0.872	0.876	0.878	0.882	0.887	0.888	0.887	0.890	0.891	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						87.10	87.19	87.48	87.60	87.69	<div></div>	<div></div>
Self-employment (% of total employment)	10.3	10.9	11.1	11.0	10.8	11.2	11.2	11.4	11.3	11.4	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.3	2.6	2.6	2.7	2.7	2.8	2.9	2.8	2.7	2.9	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	23.4	23.1	23.8	20.6	20.5	24.3	20.0	23.8	19.1		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.10	7.40	7.26	7.27	7.11	7.23	7.27	7.24	7.32		<div></div>	<div></div>
Expense of government (% of GDP)	48.0	49.3	47.6	48.1	48.1	48.3	48.0	47.8	47.5		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	2.21	2.18	2.19	2.23	2.24	2.23	2.27	2.22	2.21	2.20	<div></div>	<div></div>
Tax revenue (% of GDP)	20.8	22.1	22.0	22.7	23.4	23.3	23.4	23.2	23.8		<div></div>	<div></div>
Social contributions (% of revenue)	44.1	42.2	42.8	42.6	42.3	42.6	42.3	42.4	41.9		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	46.25	46.59	43.32	40.76	43.85	44.58	43.10	42.37	45.00	44.40	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	2.84	2.99	2.74	2.80	2.91	3.00	2.95	2.97	2.84		<div></div>	<div></div>
Unemployment rate (% of active population)	9.1	9.3	9.2	9.8	10.3	10.3	10.4	10.1	9.4	9.1	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	18.5	19.2	19.3	19.1	18.1	18.5	17.7	18.2	17.0	17.4	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	5.6	5.8	5.2	5.3	4.9	4.8	4.5	4.4	4.1	4.7	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	4.42	4.43	4.61	4.54	4.48	4.27	4.29	4.32	4.31	4.23	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	29.9	29.8	30.8	30.5	30.1	29.2	29.2	29.3	28.8	28.5	<div></div>	<div></div>
Labour productivity (% change on previous period)	-1.8	1.8	1.4	0.0	0.4	0.4	0.9	0.5	1.3	0.7	<div></div>	<div></div>





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.7	5.6	5.4	5.3	5.3	5.3	5.3	5.8	5.7	5.7			
Judicial independence (1-7 (best))	4.8	4.8	4.9	4.9	5.1	5.0	5.1	5.3	5.3	5.3			
Rule of law (-2.5 to 2.5 (strong performance))	1.45	1.52	1.45	1.45	1.43	1.47	1.41	1.41	1.44	1.44			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.22	1.31	1.16	1.13	1.16	1.08	1.13	1.07	1.16	1.17			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.24	1.20	1.17	1.24	1.22	1.22	1.21	1.14	1.15	1.18			
Trust in Government (% tend to trust)	22	22	21	30	14	17	19	17	34	26			
Trust in Parliament (% tend to trust)	28	28	26	32	19	23	20	19	31	27			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.77	7.77	7.88	7.92	8.04	7.92	7.92	7.80	7.80			
Political stability (-2.5 to 2.5 (strong performance))	0.51	0.68	0.60	0.55	0.45	0.30	0.11	-0.10	0.28	0.11			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	58.8	55.0	56.8	57.3	54.7	53.8	53.6	54.4	53.9	56.5			
Tax compliance (0-10 (high))	8.52	8.52	8.52	8.52	8.46	8.46	8.44	8.44	8.44				
Year:					2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					85				79				
Undeclared work by firm for firm					90				83				
Undeclared work by individual for private household					70				64				
Undeclared work by firm for private household					85				80				
Someone partially or completely conceals their income					84				71				
Personally know people engaged in undeclared work (% 'yes')					38				33				



CROATIA												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.60	0.62	0.56	0.71	0.70	0.69	0.51	0.49	0.57	0.46	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				46	48	48	51	49	49	48	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	-0.05	0.06	0.06	0.01	0.12	0.22	0.25	0.20	0.19	0.13	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	10 460	10 500	10 460	10 290	10 270	10 250	10 600	11 170	11 890	12 620	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.804	0.811	0.817	0.820	0.825	0.827	0.830	0.832	0.835	0.837	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						77.91	78.85	78.44	78.62	79.50	<div></div>	<div></div>
Self-employment (% of total employment)	18.5	19.2	19.0	17.4	16.5	14.1	13.7	12.5	11.1	10.8	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.5	2.1	2.2	2.3	2.3	2.2	2.1	2.0	1.9	1.9	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	7.1	8.8	9.2	9.6	9.5	7.2	9.8	5.9	5.0		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.04	7.04	7.12	7.04	7.05	7.14	7.13	7.07	7.29		<div></div>	<div></div>
Expense of government (% of GDP)	39.6	41.2	41.6	40.4	39.8	41.0	40.8	39.7	38.5		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	0.84	0.74	0.75	0.75	0.81	0.78	0.84	0.86	0.86	0.97	<div></div>	<div></div>
Tax revenue (% of GDP)	19.9	19.8	19.2	19.7	20.4	19.9	20.8	21.4	21.6		<div></div>	<div></div>
Social contributions (% of revenue)	33.0	33.1	33.5	31.6	31.2	32.4	31.4	29.9	29.8		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)		31.33	31.92	33.33	34.34	35.12	35.48	28.57	24.81	24.90	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)				0.64	0.70	0.61	0.75	0.67	0.62	0.73	<div></div>	<div></div>
Unemployment rate (% of active population)	9.3	11.8	13.7	15.8	17.4	17.2	16.1	13.4	11.0	8.4	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)		31.1	32.6	32.6	29.9	29.3	29.1	27.9	26.4	24.8	<div></div>	<div></div>
Severe material deprivation rate (% of total population)		14.3	15.2	15.9	14.7	13.9	13.7	12.5	10.3	8.6	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)		5.54	5.58	5.36	5.34	5.12	5.16	5.00	5.03	5.00	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))		31.6	31.2	30.9	30.9	30.2	30.4	29.8	29.9	29.7	<div></div>	<div></div>
Labour productivity (% change on previous period)	-6.7	2.4	3.7	1.4	2.1	-2.7	1.2	3.2	0.9	0.8	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.4	4.4	4.7	4.7	4.6	4.4	4.4	4.9	4.6	4.4			
Judicial independence (1-7 (best))	3.1	3.1	3.1	2.8	3.0	3.2	3.2	3.1	2.9	2.5			
Rule of law (-2.5 to 2.5 (strong performance))	0.16	0.20	0.22	0.25	0.29	0.32	0.20	0.41	0.33	0.32			
Regulatory quality (-2.5 to 2.5 (strong performance))	0.56	0.57	0.54	0.46	0.46	0.40	0.36	0.36	0.42	0.45			
Voice and accountability (-2.5 to 2.5 (strong performance))	0.49	0.48	0.52	0.54	0.51	0.51	0.56	0.52	0.51	0.50			
Trust in Government (% tend to trust)	12	9	9	18	16	16	25	26	15	19			
Trust in Parliament (% tend to trust)	12	9	9	15	12	18	23	24	15	18			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		6.81	6.73	6.93	6.93	6.93	6.93	6.75	6.63	6.57			
Political stability (-2.5 to 2.5 (strong performance))	0.61	0.61	0.62	0.61	0.64	0.62	0.59	0.66	0.69	0.77			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	45.8	42.3	42.2	40.9	39.6	40.6	42.5	43.3	42.6	42.4			
Tax compliance (0-10 (high))	7.80	7.80	7.80	7.80	7.67	7.69	7.69	7.69	7.69				
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					86					81			
Undeclared work by firm for firm					88					82			
Undeclared work by individual for private household					61					72			
Undeclared work by firm for private household					86					81			
Someone partially or completely conceals their income					80					78			
Personally know people engaged in undeclared work (% 'yes')					41					42			

ITALY												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.42	0.44	0.38	0.42	0.46	0.37	0.45	0.53	0.50	0.41	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				42	43	43	44	47	50	52	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	0.20	0.13	0.18	0.07	0.05	-0.03	0.02	0.08	0.19	0.24	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	26 470	26 930	27 450	26 920	26 590	26 770	27 260	27 970	28 690	29 220	■	■
Human Development Index (HDI) (0-1 (highest development))	0.868	0.871	0.875	0.874	0.873	0.874	0.875	0.878	0.881	0.883	■	■
Social Progress Index (SPI) (0-100 (high))						84.41	84.63	84.87	85.56	85.99	■	■
Self-employment (% of total employment)	23.4	23.7	23.5	23.5	23.4	23.3	23.0	22.6	21.9	21.7	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	2.2	2.2	2.1	2.1	2.2	1.9	1.9	2.0	2.0	2.1	■	■
Restrictive labour regulations (% of respondents)	11.1	9.1	10.7	10.4	9.3	11.1	10.5	11.5	11.0		■	■
Business flexibility index (0-10 (high))	6.74	7.26	7.49	7.47	7.36	7.33	7.47	7.49	7.54		■	■
Expense of government (% of GDP)	42.9	41.4	40.6	41.9	42.2	42.2	42.3	41.8	41.3		■	■
Research & Development expenditure (% of GDP)	1.22	1.22	1.20	1.26	1.30	1.34	1.34	1.37	1.37	1.39	■	■
Tax revenue (% of GDP)	22.4	22.2	22.1	23.5	23.6	23.4	23.3	23.4	23.1		■	■
Social contributions (% of revenue)	35.0	35.1	35.1	34.2	34.0	33.8	33.8	33.3	33.6		■	■
Impact of social transfers on poverty reduction (%)	21.03	21.10	19.51	20.41	21.54	21.46	21.65	21.37	19.44	21.62	■	■
Labour market policy (LMP) expenditure (% of GDP)	1.62	1.66	1.57	1.87	1.89	1.86	1.74				■	■
Unemployment rate (% of active population)	7.7	8.4	8.4	10.7	12.1	12.7	11.9	11.7	11.2	10.6	■	■
People at risk of poverty/social exclusion (% of total population)	24.9	25.0	28.1	29.9	28.5	28.3	28.7	30.0	28.9	27.3	■	■
Severe material deprivation rate (% of total population)	7.3	7.4	11.1	14.5	12.3	11.6	11.5	12.1	10.1	8.5	■	■
Inequality of income distribution (income quintile share ratio)	5.31	5.38	5.73	5.64	5.85	5.78	5.84	6.27	5.92	6.09	■	■
Gini coefficient (0-100 (perfect inequality))	31.8	31.7	32.5	32.4	32.8	32.4	32.4	33.1	32.7	33.4	■	■
Labour productivity (% change on previous period)	-3.7	2.4	0.4	-2.7	-0.1	-0.1	0.1	-0.1	0.5	-0.1	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.6	4.8	5.1	5.1	5.0	4.8	4.8	4.3	4.5	4.6			
Judicial independence (1-7 (best))	3.1	3.5	4.0	3.8	3.7	3.5	3.6	3.8	4.0	4.0			
Rule of law (-2.5 to 2.5 (strong performance))	0.40	0.43	0.47	0.40	0.40	0.38	0.28	0.33	0.32	0.25			
Regulatory quality (-2.5 to 2.5 (strong performance))	0.97	0.90	0.72	0.75	0.78	0.64	0.73	0.71	0.70	0.67			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.03	0.96	0.91	0.92	0.95	1.00	1.03	1.03	1.05	1.05			
Trust in Government (% tend to trust)	26	23	12	17	10	18	16	15	17	28			
Trust in Parliament (% tend to trust)	27	26	14	11	10	18	18	15	20	27			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.83	7.74	7.74	7.85	7.85	7.98	7.98	7.98	7.71			
Political stability (-2.5 to 2.5 (strong performance))	0.35	0.47	0.50	0.51	0.50	0.46	0.38	0.37	0.31	0.31			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	53.1	58.0	53.2	54.2	57.0	53.3	53.9	53.2	53.4	55.6			
Tax compliance (0-10 (high))	6.81	6.81	6.98	6.98	6.98	6.98	7.31	7.33	7.33				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					85				82				
Undeclared work by firm for firm					85				85				
Undeclared work by individual for private household					78				76				
Undeclared work by firm for private household					82				83				
Someone partially or completely conceals their income					83				80				
Personally know people engaged in undeclared work (% 'yes')					37				44				

# CYPRUS

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.42	1.53	1.56	1.39	1.37	1.14	1.05	0.96	0.92	0.92	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				66	63	63	61	55	57	59	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	0.91	0.97	0.87	1.25	1.25	1.08	1.01	0.83	0.78	0.64	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	23 110	23 400	23 270	22 500	20 880	20 420	21 030	22 160	23 320	24 290	■	■
Human Development Index (HDI) (0-1 (highest development))	0.854	0.850	0.853	0.852	0.854	0.856	0.864	0.869	0.871	0.873	■	■
Social Progress Index (SPI) (0-100 (high))						79.39	79.52	80.94	81.53	82.02	■	■
Self-employment (% of total employment)	17.4	16.5	16.1	14.8	15.9	16.1	13.6	13.0	12.4	12.6	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	4.0	4.0	3.9	4.1	4.1	4.1	4.0	4.0	3.9	3.8	■	■
Restrictive labour regulations (% of respondents)	10.1	11.2	6.5	11.2	7.6	8.8	6.1	8.6	10.2		■	■
Business flexibility index (0-10 (high))	7.03	7.33	7.31	7.17	7.24	7.63	7.44	7.55	7.72		■	■
Expense of government (% of GDP)	39.0	38.9	40.0	41.0	42.4	48.7	39.6	36.2	35.4		■	■
Research & Development expenditure (% of GDP)	0.44	0.44	0.45	0.44	0.49	0.51	0.48	0.52	0.55	0.55	■	■
Tax revenue (% of GDP)	23.2	23.1	23.2	23.4	23.6	24.8	24.0	23.5	24.0		■	■
Social contributions (% of revenue)	21.9	22.1	22.2	21.8	21.0	21.1	21.9	22.3	22.8		■	■
Impact of social transfers on poverty reduction (%)	33.05	33.62	37.02	37.45	37.04	41.46	36.22	35.60	35.92	36.36	■	■
Labour market policy (LMP) expenditure (% of GDP)	0.80	0.91	1.18	1.33	1.50	1.06	0.95	0.74	0.60	0.52	■	■
Unemployment rate (% of active population)	5.4	6.3	7.9	11.9	15.9	16.1	15.0	13.0	11.1	8.4	■	■
People at risk of poverty/social exclusion (% of total population)	23.5	24.6	24.6	27.1	27.8	27.4	28.9	27.7	25.2	23.9	■	■
Severe material deprivation rate (% of total population)	9.5	11.2	11.7	15.0	16.1	15.3	15.4	13.6	11.5	10.2	■	■
Inequality of income distribution (income quintile share ratio)	4.37	4.54	4.34	4.67	4.91	5.37	5.20	4.88	4.56	4.29	■	■
Gini coefficient (0-100 (perfect inequality))	29.5	30.1	29.2	31.0	32.4	34.8	33.6	32.1	30.8	29.1	■	■
Labour productivity (% change on previous period)	-2.0	1.4	0.1	0.1	-1.0	0.1	1.8	2.0	-0.9	0.0	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.4	5.0	5.2	5.1	4.8	4.7	4.7	4.5	4.7	4.9	<div></div>	<div></div>	
Judicial independence (1-7 (best))	5.4	5.5	5.3	4.8	4.5	4.5	4.7	4.7	4.7	4.8	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	1.21	1.22	1.07	1.10	1.04	1.08	1.04	0.72	0.88	0.75	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	1.36	1.42	1.24	1.13	0.92	1.10	1.06	1.05	1.03	1.02	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	1.07	1.02	1.05	1.02	0.98	1.02	1.03	1.05	1.06	1.04	<div></div>	<div></div>	
Trust in Government (% tend to trust)	53	45	29	16	26	23	16	32	35	32	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	53	44	27	15	18	20	14	25	27	28	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.29	7.29	7.29	7.29	7.40	7.53	7.65	7.59	7.59	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	0.39	0.45	0.61	0.64	0.56	0.55	0.55	0.60	0.54	0.54	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	55.0	54.5	56.4	57.4	52.1	51.4	51.5	50.3	51.0	52.4	<div></div>	<div></div>	
Tax compliance (0-10 (high))	8.33	8.33	8.35	8.35	8.36	8.37	8.58	8.58	8.63		<div></div>	<div></div>	
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					94					88			<div></div>
Undeclared work by firm for firm					97					91			<div></div>
Undeclared work by individual for private household					81					81			<div></div>
Undeclared work by firm for private household					94					87			<div></div>
Someone partially or completely conceals their income					96					85			<div></div>
Personally know people engaged in undeclared work (% 'yes')					39					38			<div></div>

LATVIA												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.62	0.71	0.70	0.84	0.89	0.96	1.09	1.01	0.90	1.04	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				49	53	55	56	57	58	58	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	0.23	0.23	0.29	0.25	0.33	0.42	0.47	0.43	0.54	0.33	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	8 780	8 500	9 820	10 870	11 350	11 860	12 350	12 800	13 810	15 130	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.819	0.817	0.822	0.825	0.834	0.836	0.842	0.845	0.849	0.854	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						78.71	78.80	79.11	79.62	79.80	<div></div>	<div></div>
Self-employment (% of total employment)	10.0	10.1	10.2	10.5	10.7	10.7	11.8	12.0	11.9	11.0	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	3.2	3.1	3.3	3.4	3.4	3.4	3.5	3.3	2.9	3.3	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	2.2	1.0	1.6	1.7	2.0	2.6	4.4	2.4	4.4		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.51	7.39	7.49	7.84	7.86	8.03	8.24	7.88	7.94		<div></div>	<div></div>
Expense of government (% of GDP)	51.9	55.4	47.5	44.1	43.6	44.2	43.4	42.5	43.0		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	0.45	0.61	0.70	0.66	0.61	0.69	0.62	0.44	0.51	0.64	<div></div>	<div></div>
Tax revenue (% of GDP)	18.8	19.8	20.0	21.1	21.7	22.0	22.5	23.8	23.6		<div></div>	<div></div>
Social contributions (% of revenue)	33.4	29.6	29.8	29.4	29.1	29.0	28.7	28.4	28.8		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	14.84	26.67	29.10	25.29	25.38	21.48	17.58	21.58	21.91	19.10	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	1.33	1.26	0.69	0.50	0.55	0.55	0.56	0.64	0.59	0.58	<div></div>	<div></div>
Unemployment rate (% of active population)	17.5	19.5	16.2	15.0	11.9	10.8	9.9	9.6	8.7	7.4	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	37.9	38.2	40.1	36.2	35.1	32.7	30.9	28.5	28.2	28.4	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	22.1	27.6	31.0	25.6	24.0	19.2	16.4	12.8	11.3	9.5	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	7.40	6.84	6.50	6.47	6.32	6.48	6.51	6.20	6.30	6.78	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	37.5	35.9	35.1	35.7	35.2	35.5	35.4	34.5	34.5	35.6	<div></div>	<div></div>
Labour productivity (% change on previous period)	0.1	2.3	4.7	2.6	0.0	3.3	1.8	2.1	3.8	3.0	<div></div>	<div></div>



III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.1	4.1	4.2	4.3	4.4	4.6	4.6	4.2	4.3	4.5	<div></div>	<div></div>	
Judicial independence (1-7 (best))	3.7	3.7	3.8	4.0	3.9	4.0	4.2	4.0	3.6	3.7	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	0.81	0.79	0.75	0.79	0.77	0.87	0.79	0.96	0.93	0.96	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	0.99	0.98	0.96	1.02	1.04	1.17	1.09	1.08	1.15	1.19	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	0.85	0.79	0.74	0.78	0.77	0.85	0.85	0.84	0.80	0.81	<div></div>	<div></div>	
Trust in Government (% tend to trust)	9	20	19	17	21	28	23	32	27	31	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	6	15	14	13	17	22	21	21	20	21	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.05	7.05	7.05	7.05	7.48	7.37	7.31	7.25	7.38	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	0.35	0.53	0.32	0.45	0.59	0.49	0.44	0.48	0.46	0.42	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	47.1	44.4	44.0	48.2	47.5	49.2	48.6	48.2	48.4	46.1	<div></div>	<div></div>	
Tax compliance (0-10 (high))	6.72	6.75	7.04	7.04	7.84	7.84	8.11	8.11	8.11		<div></div>	<div></div>	
Year:	2013					2019							
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis						57						77	<div></div>
Undeclared work by firm for firm						66						79	<div></div>
Undeclared work by individual for private household						33						47	<div></div>
Undeclared work by firm for private household						53						72	<div></div>
Someone partially or completely conceals their income						53						60	<div></div>
Personally know people engaged in undeclared work (% 'yes')						46						36	<div></div>





























# LITHUANIA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.69	0.74	0.70	0.83	0.83	0.98	1.18	1.07	0.97	1.07	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				54	57	58	59	59	59	59	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	0.23	0.38	0.33	0.39	0.43	0.56	0.62	0.71	0.55	0.50	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	8 520	9 030	10 310	11 160	11 830	12 460	12 850	13 560	14 940	16 160	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.821	0.824	0.831	0.835	0.840	0.852	0.855	0.860	0.866	0.869	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						80.19	80.32	80.58	81.15	81.22	<div></div>	<div></div>
Self-employment (% of total employment)	10.4	9.3	9.2	9.7	10.6	10.8	11.1	11.4	11.1	10.9	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.9	2.7	2.8	2.9	3.0	3.0	3.1	3.2	3.1	3.0	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	6.7	8.8	8.3	11.1	13.0	13.4	13.5	14.3	13.2		<div></div>	<div></div>
Business flexibility index (0-10 (high))	6.67	7.08	7.12	7.65	8.23	8.42	8.00	8.04	8.04		<div></div>	<div></div>
Expense of government (% of GDP)	41.8	39.6	39.6	33.9	33.1	32.7	32.7	32.6	31.1		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	0.83	0.79	0.91	0.90	0.95	1.03	1.04	0.84	0.90	0.88	<div></div>	<div></div>
Tax revenue (% of GDP)	17.0	16.0	15.5	15.6	15.6	15.9	16.7	16.9	16.6		<div></div>	<div></div>
Social contributions (% of revenue)	37.6	36.0	35.7	35.2	35.2	34.9	35.8	37.9	39.0		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	29.02	34.50	36.42	34.51	32.01	30.55	22.38	21.51	23.15	22.90	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	0.90	0.78	0.55	0.47	0.46	0.43	0.53	0.52	0.55	0.66	<div></div>	<div></div>
Unemployment rate (% of active population)	13.8	17.8	15.4	13.4	11.8	10.7	9.1	7.9	7.1	6.2	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	29.6	34.0	33.1	32.5	30.8	27.3	29.3	30.1	29.6	28.3	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	15.6	19.9	19.0	19.8	16.0	13.6	13.9	13.5	12.4	11.1	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	6.39	7.35	5.84	5.32	6.05	6.10	7.46	7.06	7.28	7.09	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	35.9	37.0	33.0	32.0	34.6	35.0	37.9	37.0	37.6	36.9	<div></div>	<div></div>
Labour productivity (% change on previous period)	-7.7	7.0	5.4	1.9	2.2	1.4	0.6	0.3	5.0	2.2	<div></div>	<div></div>





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.2	4.0	4.2	4.3	4.2	4.3	4.3	4.7	4.7	5.0	<div></div>	<div></div>	
Judicial independence (1-7 (best))	3.7	3.6	3.4	3.5	3.7	3.6	3.9	4.1	4.2	4.3	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	0.73	0.78	0.77	0.85	0.84	0.94	1.01	1.03	0.99	0.96	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	0.95	0.96	0.93	1.12	1.15	1.19	1.28	1.14	1.16	1.11	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	0.90	0.92	0.86	0.93	0.94	0.96	0.97	1.00	0.99	0.92	<div></div>	<div></div>	
Trust in Government (% tend to trust)	15	15	18	21	20	32	32	29	33	28	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	7	6	11	13	11	17	17	22	18	16	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.24	7.24	7.24	7.54	7.54	7.54	7.47	7.41	7.50	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	0.63	0.72	0.67	0.79	0.96	0.74	0.76	0.83	0.78	0.75	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	34.3	32.0	32.7	36.8	37.1	36.6	37.1	41.0	39.5	48.0	<div></div>	<div></div>	
Tax compliance (0-10 (high))	8.04	8.04	8.04	8.04	8.04	8.08	8.08	8.77	8.89		<div></div>	<div></div>	
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					71					85			<div></div>
Undeclared work by firm for firm					75					85			<div></div>
Undeclared work by individual for private household					40					60			<div></div>
Undeclared work by firm for private household					67					78			<div></div>
Someone partially or completely conceals their income					71					70			<div></div>
Personally know people engaged in undeclared work (% 'yes')					35					32			<div></div>

## LUXEMBOURG

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.75	1.72	1.75	1.67	1.63	1.65	1.72	1.69	1.68	1.78	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				80	80	82	85	81	82	81	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	1.97	2.05	2.16	2.12	2.12	2.07	2.10	2.10	1.99	2.09	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	74 220	79 160	83 100	83 000	85 270	89 240	91 440	93 930	95 170	98 640	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.885	0.893	0.892	0.892	0.892	0.895	0.899	0.904	0.908	0.909	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						83.62	84.12	86.74	86.93	87.07	<div></div>	<div></div>
Self-employment (% of total employment)	8.1	7.8	8.1	8.4	8.4	8.3	8.9	9.2	9.1	7.7	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	4.2	4.0	3.6	3.8	4.2	4.3	4.4	4.5	4.4	4.3	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	25.4	18.3	19.1	17.5	25.0	22.7	18.4	17.5	18.9		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.38	7.58	7.63	7.66	7.75	7.74	7.90	7.87	7.88		<div></div>	<div></div>
Expense of government (% of GDP)	41.1	39.9	38.9	41.0	40.9	39.4	38.8	37.8	38.7		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	1.68	1.50	1.46	1.27	1.30	1.26	1.27	1.26	1.27	1.21	<div></div>	<div></div>
Tax revenue (% of GDP)	25.1	25.0	24.6	25.7	25.9	25.7	25.1	24.9	25.3		<div></div>	<div></div>
Social contributions (% of revenue)	30.6	29.8	29.9	29.9	29.5	28.8	29.2	29.2	29.8		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	44.81	50.17	50.00	47.93	45.92	40.58	43.75	39.11	35.52	33.45	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	1.33	1.26	1.18	1.32	1.39	1.29	1.27	1.34	1.32	1.20	<div></div>	<div></div>
Unemployment rate (% of active population)	5.1	4.6	4.8	5.1	5.9	6.0	6.5	6.3	5.6	5.5	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	17.8	17.1	16.8	18.4	19.0	19.0	18.5	19.8	21.5	21.9	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	1.1	0.5	1.2	1.3	1.8	1.4	2.0	1.6	1.2	1.3	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	4.31	4.10	3.97	4.13	4.59	4.42	4.26	5.02	5.00	5.72	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	29.2	27.9	27.2	28.0	30.4	28.7	28.5	31.0	30.9	33.2	<div></div>	<div></div>
Labour productivity (% change on previous period)	-5.4	3.0	-0.4	-2.7	1.8	1.7	1.7	1.5	-1.6	-0.6	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	6.2	6.0	5.9	5.9	6.0	6.1	6.1	6.2	6.2	6.1			
Judicial independence (1-7 (best))	6.0	5.9	6.1	5.8	5.7	6.0	6.2	6.2	6.2	6.2			
Rule of law (-2.5 to 2.5 (strong performance))	1.83	1.85	1.83	1.80	1.82	1.91	1.87	1.76	1.74	1.81			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.65	1.68	1.87	1.77	1.78	1.63	1.66	1.72	1.69	1.76			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.56	1.57	1.60	1.65	1.63	1.55	1.55	1.50	1.52	1.57			
Trust in Government (% tend to trust)	68	67	68	57	51	51	60	66	68	62			
Trust in Parliament (% tend to trust)	59	58	56	48	41	47	52	50	58	52			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.88	8.88	8.88	8.88	8.88	8.88	8.81	8.81	8.81			
Political stability (-2.5 to 2.5 (strong performance))	1.45	1.46	1.32	1.33	1.34	1.38	1.44	1.42	1.33	1.37			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	62.9	63.1	62.7	62.7	61.2	51.6	60.6	59.9	60.0	64.3			
Tax compliance (0-10 (high))	9.34	9.34	9.34	9.38	9.38	9.38	9.38	9.38	9.38				
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					87					81			
Undeclared work by firm for firm					91					84			
Undeclared work by individual for private household					55					65			
Undeclared work by firm for private household					86					80			
Someone partially or completely conceals their income					85					73			
Personally know people engaged in undeclared work (% 'yes')					35					32			

HUNGARY												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.67	0.67	0.67	0.63	0.65	0.53	0.50	0.46	0.52	0.49	🔴	🟡
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				55	54	54	51	48	45	46	🔴	🟡
Control of corruption (-2.5 to 2.5 (strong performance))	0.43	0.37	0.40	0.36	0.32	0.16	0.15	0.10	0.09	0.05	🔴	🔴
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	9 420	9 900	10 180	10 050	10 310	10 730	11 400	11 740	12 830	13 690	🟢	🟢
Human Development Index (HDI) (0-1 (highest development))	0.823	0.826	0.823	0.826	0.835	0.833	0.835	0.838	0.841	0.845	🟢	🟢
Social Progress Index (SPI) (0-100 (high))						79.09	79.20	79.46	78.87	79.09	🟡	🟡
Self-employment (% of total employment)	12.2	12.0	11.7	11.4	10.9	10.6	10.6	10.4	10.1	10.2	🟢	🟡
2. State intervention												
Burden of government regulation (1-7 (best))	2.1	2.2	2.3	2.3	2.4	2.6	2.6	2.6	2.9	3.1	🟢	🟢
Restrictive labour regulations (% of respondents)	4.9	4.5	3.5	2.8	1.9	1.0	1.9	1.5	3.2		🔴	🟡
Business flexibility index (0-10 (high))	7.55	7.82	7.87	7.74	7.53	7.31	7.50	7.41	7.29		🔴	🔴
Expense of government (% of GDP)	45.0	43.9	45.2	43.9	46.0	44.3	42.4	43.1	41.6		🔴	🟡
Research & Development expenditure (% of GDP)	1.13	1.14	1.19	1.26	1.39	1.35	1.35	1.19	1.33	1.53	🟢	🟢
Tax revenue (% of GDP)	23.3	22.8	21.1	22.8	22.7	22.9	23.1	23.0	22.9		🔴	🔴
Social contributions (% of revenue)	31.5	29.9	33.5	31.2	30.9	30.7	30.3	32.6	30.9		🔴	🟡
Impact of social transfers on poverty reduction (%)	57.09	56.69	51.38	47.62	44.44	43.61	42.02	43.80	46.40	48.80	🔴	🟢
Labour market policy (LMP) expenditure (% of GDP)	1.13	1.34	1.13	1.16	1.21	1.22	1.13	1.17	1.07		🔴	🟡
Unemployment rate (% of active population)	10.0	11.2	11.0	11.0	10.2	7.7	6.8	5.1	4.2	3.7	🟢	🟢
People at risk of poverty/social exclusion (% of total population)	29.6	29.9	31.5	33.5	34.8	31.8	28.2	26.3	25.6	19.6	🟢	🟢
Severe material deprivation rate (% of total population)	20.3	21.6	23.4	26.3	27.8	24.0	19.4	16.2	14.5	10.1	🟢	🟢
Inequality of income distribution (income quintile share ratio)	3.51	3.41	3.94	4.00	4.29	4.33	4.30	4.26	4.27	4.35	🔴	🔴
Gini coefficient (0-100 (perfect inequality))	24.7	24.1	26.9	27.2	28.3	28.6	28.2	28.2	28.1	28.7	🔴	🟡
Labour productivity (% change on previous period)	-4.9	1.3	1.8	-2.4	0.7	-0.4	1.6	-1.5	2.4	2.7	🟢	🟢

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.4	4.2	4.2	4.2	4.2	4.1	4.1	4.3	4.5	4.4			
Judicial independence (1-7 (best))	4.1	4.0	3.9	3.7	3.9	4.0	3.6	3.1	3.2	3.1			
Rule of law (-2.5 to 2.5 (strong performance))	0.80	0.78	0.76	0.62	0.58	0.50	0.40	0.42	0.53	0.56			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.08	1.02	1.03	0.99	0.91	0.75	0.77	0.60	0.65	0.60			
Voice and accountability (-2.5 to 2.5 (strong performance))	0.91	0.89	0.84	0.75	0.74	0.55	0.56	0.40	0.37	0.32			
Trust in Government (% tend to trust)	14	48	26	27	37	33	33	35	48	48			
Trust in Parliament (% tend to trust)	15	47	28	29	34	29	30	30	42	46			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.21	7.04	6.96	6.96	6.90	6.84	6.72	6.64	6.63			
Political stability (-2.5 to 2.5 (strong performance))	0.54	0.69	0.74	0.68	0.80	0.67	0.75	0.65	0.81	0.76			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	47.8	48.9	46.8	49.7	50.0	52.3	46.0	45.3	49.5	50.9			
Tax compliance (0-10 (high))	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					75				76				
Undeclared work by firm for firm					82				79				
Undeclared work by individual for private household					64				67				
Undeclared work by firm for private household					74				75				
Someone partially or completely conceals their income					71				75				
Personally know people engaged in undeclared work (% 'yes')					29				38				































# MALTA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.17	1.19	1.20	1.25	1.26	1.03	0.85	0.96	1.00	0.97	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				57	56	55	60	55	56	54	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	0.77	0.79	0.77	0.94	0.98	0.85	0.90	0.72	0.74	0.58	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	14 880	15 920	16 420	17 060	17 940	19 560	21 620	22 690	24 090	25 490	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.835	0.847	0.848	0.854	0.861	0.868	0.877	0.881	0.883	0.885	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						80.57	80.46	80.95	81.95	82.28	<div></div>	<div></div>
Self-employment (% of total employment)	13.8	14.4	13.5	13.3	13.7	13.5	13.8	14.0	14.8	14.2	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	3.0	3.0	2.8	3.0	3.4	3.4	3.5	3.5	3.7	3.9	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	7.8	7.7	6.5	6.8	5.2	3.0	4.9	7.4	5.0		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.02	6.96	7.62	7.63	7.79	7.96	8.10	8.17	8.34		<div></div>	<div></div>
Expense of government (% of GDP)	41.6	40.6	40.3	41.1	40.8	39.2	36.9	35.6	34.9		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	0.52	0.61	0.67	0.83	0.77	0.71	0.74	0.57	0.58	0.55	<div></div>	<div></div>
Tax revenue (% of GDP)	26.5	26.1	26.2	26.4	26.7	26.7	25.2	25.7	26.5		<div></div>	<div></div>
Social contributions (% of revenue)	18.5	18.1	18.6	18.3	17.6	17.0	16.2	16.7	16.0		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	34.93	34.04	32.76	37.08	32.48	33.33	30.25	30.67	30.13	30.58	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	0.49	0.50	0.50	0.53	0.49	0.48	0.45	0.42	0.38		<div></div>	<div></div>
Unemployment rate (% of active population)	6.9	6.8	6.4	6.2	6.1	5.7	5.4	4.7	4.0	3.7	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	20.3	21.2	22.1	23.1	24.6	23.9	23.0	20.3	19.3	19.0	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	5.0	6.5	6.6	9.2	10.2	10.3	8.5	4.4	3.3	3.0	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	3.99	4.33	4.01	3.94	4.14	4.05	4.15	4.22	4.21	4.28	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	27.4	28.6	27.2	27.1	28.0	27.7	28.1	28.6	28.2	28.7	<div></div>	<div></div>
Labour productivity (% change on previous period)	-2.5	1.8	-1.5	0.0	1.0	3.2	6.5	1.5	-1.5	1.2	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS												
Reliability of police services (1-7 (best))	5.5	5.3	5.2	5.0	5.3	5.3	5.3	5.0	4.8	4.3	<div></div>	<div></div>
Judicial independence (1-7 (best))	5.1	5.0	5.1	5.0	4.8	4.6	4.8	4.6	4.4	4.2	<div></div>	<div></div>
Rule of law (-2.5 to 2.5 (strong performance))	1.48	1.42	1.29	1.34	1.33	1.19	1.14	1.00	1.14	1.05	<div></div>	<div></div>
Regulatory quality (-2.5 to 2.5 (strong performance))	1.37	1.43	1.34	1.33	1.30	1.08	1.17	1.16	1.28	1.34	<div></div>	<div></div>
Voice and accountability (-2.5 to 2.5 (strong performance))	1.15	1.17	1.14	1.17	1.16	1.18	1.20	1.20	1.17	1.12	<div></div>	<div></div>
Trust in Government (% tend to trust)	36	34	27	34	48	56	51	52	51	63	<div></div>	<div></div>
Trust in Parliament (% tend to trust)	41	35	28	29	51	51	47	48	47	59	<div></div>	<div></div>
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY												
Democracy Index (0-10 (full democracy))		8.28	8.28	8.28	8.28	8.39	8.39	8.39	8.15	8.21	<div></div>	<div></div>
Political stability (-2.5 to 2.5 (strong performance))	1.25	1.25	1.06	1.07	1.04	1.13	1.06	1.08	1.25	1.29	<div></div>	<div></div>
B. INFORMAL INSTITUTIONS												
Social capital (0-100 (high))	64.1	64.2	62.6	62.7	64.1	66.7	67.9	67.5	67.3	67.2	<div></div>	<div></div>
Tax compliance (0-10 (high))			8.44	8.44	8.44	8.44	8.44	8.44	8.44		<div></div>	<div></div>
	Year:				2013				2019			
Acceptability of undeclared work (% total 'unacceptable')												
Firm hires worker on undeclared basis					88					89	<div></div>	
Undeclared work by firm for firm					89					89	<div></div>	
Undeclared work by individual for private household					81					87	<div></div>	
Undeclared work by firm for private household					87					87	<div></div>	
Someone partially or completely conceals their income					90					88	<div></div>	
Personally know people engaged in undeclared work (% 'yes')					20					37	<div></div>	

## NETHERLANDS





























INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.74	1.73	1.79	1.81	1.78	1.82	1.83	1.83	1.85	1.85	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				84	83	83	84	83	82	82	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	2.13	2.14	2.12	2.12	2.05	1.99	1.88	1.91	1.87	2.01	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	37 800	38 470	38 960	38 970	39 300	39 820	40 730	41 590	43 090	44 920	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.906	0.911	0.922	0.921	0.924	0.925	0.927	0.929	0.932	0.934	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						88.21	88.38	88.32	88.29	88.40	<div></div>	<div></div>
Self-employment (% of total employment)	14.3	14.5	14.5	14.8	15.6	16.1	16.3	16.4	16.4	16.4	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.9	3.1	3.5	3.9	4.0	3.9	3.9	4.0	4.3	4.4	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	14.2	17.0	18.8	15.2	16.5	19.2	18.9	21.1	18.0		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.63	7.81	7.91	7.97	7.71	7.83	7.85	7.94	8.06		<div></div>	<div></div>
Expense of government (% of GDP)	41.4	41.6	41.1	41.3	41.4	41.0	39.9	39.0	37.8		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	1.67	1.70	1.88	1.92	1.93	1.98	1.98	2.00	1.98	2.16	<div></div>	<div></div>
Tax revenue (% of GDP)	20.9	21.0	20.2	19.4	19.7	20.6	21.2	21.9	23.1		<div></div>	<div></div>
Social contributions (% of revenue)	34.4	35.0	36.9	38.9	38.6	38.4	37.4	38.3	35.9		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	45.85	51.18	47.37	50.97	50.00	45.54	47.98	42.53	39.73	38.99	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	2.46	2.52	2.36	2.46	0.74	2.77	2.54	2.36	2.14	1.94	<div></div>	<div></div>
Unemployment rate (% of active population)	4.4	5.0	5.0	5.8	7.3	7.4	6.9	6.0	4.9	3.8	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	15.1	15.1	15.7	15.0	15.9	16.5	16.4	16.7	17.0	16.7	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	1.4	2.2	2.5	2.3	2.5	3.2	2.6	2.6	2.6	2.4	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	3.97	3.65	3.75	3.61	3.58	3.83	3.82	3.93	3.99	4.05	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	27.2	25.5	25.8	25.4	25.1	26.2	26.7	26.9	27.1	27.4	<div></div>	<div></div>
Labour productivity (% change on previous period)	-2.8	2.0	0.7	-0.8	1.1	1.5	1.0	0.6	0.7	0.1	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS												
Reliability of police services (1-7 (best))	6.2	6.0	6.1	6.2	6.1	6.0	6.0	6.2	6.1	6.0		
Judicial independence (1-7 (best))	6.4	6.2	6.3	6.4	6.2	6.1	6.3	6.4	6.4	6.3		
Rule of law (-2.5 to 2.5 (strong performance))	1.81	1.82	1.82	1.86	1.84	1.98	1.94	1.89	1.83	1.82		
Regulatory quality (-2.5 to 2.5 (strong performance))	1.70	1.73	1.81	1.75	1.77	1.77	1.80	1.98	2.05	2.02		
Voice and accountability (-2.5 to 2.5 (strong performance))	1.46	1.45	1.54	1.61	1.57	1.55	1.56	1.54	1.57	1.60		
Trust in Government (% tend to trust)	49	48	45	47	37	52	52	59	65	63		
Trust in Parliament (% tend to trust)	52	55	50	53	41	55	52	61	67	68		
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY												
Democracy Index (0-10 (full democracy))		8.99	8.99	8.99	8.84	8.92	8.92	8.80	8.89	8.89		
Political stability (-2.5 to 2.5 (strong performance))	0.94	0.94	1.11	1.19	1.14	1.05	0.93	0.91	0.92	0.87		
B. INFORMAL INSTITUTIONS												
Social capital (0-100 (high))	76.2	72.7	71.9	70.7	71.3	70.5	74.6	72.9	74.5	75.8		
Tax compliance (0-10 (high))	8.50	8.58	8.58	8.62	8.62	8.62	8.67	8.67	8.67			
Year:					2013					2019		
Acceptability of undeclared work (% total 'unacceptable')												
Firm hires worker on undeclared basis					77					75		
Undeclared work by firm for firm					88					88		
Undeclared work by individual for private household					39					34		
Undeclared work by firm for private household					80					77		
Someone partially or completely conceals their income					79					75		
Personally know people engaged in undeclared work (% 'yes')					55					55		

AUSTRIA												
INDICATOR	YEAR:										TREND	TREND
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2009 vs. 2018	2016-2018
<b>A. FORMAL INSTITUTIONS</b>												
<b>I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES</b>												
<b>1. Level of modernisation of government</b>												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.67	1.84	1.62	1.58	1.59	1.57	1.48	1.51	1.46	1.45	■	■
<b>2. Formal institutions acting in a corrupt manner</b>												
Corruption Perceptions Index (CPI) (0-100 (very clean))				69	69	72	76	75	75	76	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	1.70	1.59	1.43	1.39	1.55	1.47	1.52	1.55	1.53	1.60	■	■
<b>II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES</b>												
<b>1. Modernisation Explanation - Level of 'development'</b>												
GDP (current prices, euro per capita)	34 530	35 390	36 970	37 820	38 210	38 990	39 890	40 880	42 100	43 640	■	■
Human Development Index (HDI) (0-1 (highest development))	0.886	0.895	0.897	0.899	0.896	0.904	0.906	0.909	0.912	0.914	■	■
Social Progress Index (SPI) (0-100 (high))						85.90	86.13	86.51	86.89	86.72	■	■
Self-employment (% of total employment)	11.5	11.7	11.3	11.2	11.4	11.3	11.4	11.2	10.9	10.8	■	■
<b>2. State intervention</b>												
Burden of government regulation (1-7 (best))	3.5	3.6	3.5	3.3	3.4	3.4	3.4	3.7	3.5	3.5	■	■
Restrictive labour regulations (% of respondents)	19.7	21.2	18.3	16.3	18.1	17.9	20.8	23.6	23.2		■	■
Business flexibility index (0-10 (high))	7.58	7.58	7.56	7.55	7.56	7.28	7.39	7.37	7.45		■	■
Expense of government (% of GDP)	47.8	46.4	45.5	46.1	46.6	47.5	46.3	45.0	44.2		■	■
Research & Development expenditure (% of GDP)	2.60	2.73	2.67	2.91	2.95	3.08	3.05	3.12	3.05	3.17	■	■
Tax revenue (% of GDP)	25.2	25.3	25.4	25.9	26.4	26.4	26.8	25.4	25.4		■	■
Social contributions (% of revenue)	32.4	32.4	32.3	32.1	32.4	32.6	32.2	33.0	33.5		■	■
Impact of social transfers on poverty reduction (%)	42.69	43.46	46.49	44.19	44.40	44.49	45.70	46.39	42.17	43.25	■	■
Labour market policy (LMP) expenditure (% of GDP)	2.24	2.18	1.97	1.97	2.16	2.19	2.22	2.27	2.20		■	■
Unemployment rate (% of active population)	5.3	4.8	4.6	4.9	5.4	5.6	5.7	6.0	5.5	4.9	■	■
People at risk of poverty/social exclusion (% of total population)	19.1	18.9	19.2	18.5	18.8	19.2	18.3	18.0	18.1	17.5	■	■
Severe material deprivation rate (% of total population)	4.6	4.3	4.0	4.0	4.2	4.0	3.6	3.0	3.7	2.8	■	■
Inequality of income distribution (income quintile share ratio)	4.15	4.34	4.12	4.20	4.11	4.13	4.05	4.09	4.29	4.04	■	■
Gini coefficient (0-100 (perfect inequality))	27.5	28.3	27.4	27.6	27.0	27.6	27.2	27.2	27.9	26.8	■	■
Labour productivity (% change on previous period)	-3.3	1.1	1.3	-0.4	-0.3	-0.3	0.4	0.8	0.8	0.7	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS												
Reliability of police services (1-7 (best))	5.8	5.7	5.9	6.0	5.9	5.9	5.9	6.2	6.1	6.1	<div></div>	<div></div>
Judicial independence (1-7 (best))	6.1	5.8	5.5	5.2	5.1	5.2	5.2	5.4	5.6	5.6	<div></div>	<div></div>
Rule of law (-2.5 to 2.5 (strong performance))	1.78	1.80	1.80	1.86	1.85	1.95	1.86	1.81	1.81	1.88	<div></div>	<div></div>
Regulatory quality (-2.5 to 2.5 (strong performance))	1.45	1.45	1.38	1.52	1.49	1.49	1.40	1.44	1.44	1.54	<div></div>	<div></div>
Voice and accountability (-2.5 to 2.5 (strong performance))	1.39	1.43	1.40	1.45	1.46	1.39	1.38	1.34	1.34	1.38	<div></div>	<div></div>
Trust in Government (% tend to trust)	54	47	46	49	50	50	33	40	46	55	<div></div>	<div></div>
Trust in Parliament (% tend to trust)	55	49	46	50	54	53	39	49	48	56	<div></div>	<div></div>
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY												
Democracy Index (0-10 (full democracy))		8.49	8.49	8.62	8.48	8.54	8.54	8.41	8.42	8.29	<div></div>	<div></div>
Political stability (-2.5 to 2.5 (strong performance))	1.19	1.15	1.19	1.34	1.36	1.27	1.14	0.91	1.05	0.92	<div></div>	<div></div>
B. INFORMAL INSTITUTIONS												
Social capital (0-100 (high))	71.1	65.9	68.3	67.4	67.4	67.9	65.4	66.2	66.4	65.3	<div></div>	<div></div>
Tax compliance (0-10 (high))	8.09	8.09	8.09	8.14	8.14	8.14	8.53	8.53	8.53		<div></div>	<div></div>
Year:	2013						2019					
Acceptability of undeclared work (% total 'unacceptable')												
Firm hires worker on undeclared basis					82					84	<div></div>	
Undeclared work by firm for firm					87					84	<div></div>	
Undeclared work by individual for private household					63					64	<div></div>	
Undeclared work by firm for private household					81					83	<div></div>	
Someone partially or completely conceals their income					81					75	<div></div>	
Personally know people engaged in undeclared work (% 'yes')					31					33	<div></div>	





























POLAND												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.53	0.64	0.62	0.68	0.72	0.83	0.80	0.71	0.64	0.66	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				58	60	61	63	62	60	60	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	0.45	0.50	0.56	0.66	0.60	0.64	0.67	0.74	0.72	0.64	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	8 240	9 390	9 870	10 100	10 250	10 680	11 190	11 100	12 160	12 920	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.828	0.835	0.840	0.836	0.851	0.853	0.858	0.864	0.868	0.872	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						80.70	81.05	81.76	81.02	80.80	<div></div>	<div></div>
Self-employment (% of total employment)	18.8	19.1	19.1	18.9	18.5	18.3	18.3	18.1	17.8	17.9	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.7	2.7	2.6	2.6	2.7	2.9	2.8	2.7	2.8	2.8	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	13.0	13.2	13.4	13.6	16.5	15.5	14.7	14.1	12.5		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.12	7.22	7.52	7.68	7.47	7.69	7.69	7.25	7.19		<div></div>	<div></div>
Expense of government (% of GDP)	36.5	36.6	34.7	34.9	35.4	34.8	34.3	34.8	34.2		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	0.66	0.72	0.75	0.88	0.87	0.94	1.00	0.96	1.03	1.21	<div></div>	<div></div>
Tax revenue (% of GDP)	15.9	16.5	16.7	16.0	15.6	15.5	15.6	16.4	16.8		<div></div>	<div></div>
Social contributions (% of revenue)	38.2	36.6	36.9	39.4	41.0	40.7	41.0	41.2	40.7		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	27.54	27.87	26.56	25.33	24.78	26.41	23.14	24.45	37.50	40.32	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	0.94	1.02	0.70	0.75	0.84	0.79	0.74	0.69	0.62		<div></div>	<div></div>
Unemployment rate (% of active population)	8.1	9.7	9.7	10.1	10.3	9.0	7.5	6.2	4.9	3.9	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	27.8	27.8	27.2	26.7	25.8	24.7	23.4	21.9	19.5	18.9	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	15.0	14.2	13.0	13.5	11.9	10.4	8.1	6.7	5.9	4.7	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	4.97	4.98	4.95	4.92	4.88	4.91	4.92	4.76	4.56	4.25	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	31.4	31.1	31.1	30.9	30.7	30.8	30.6	29.8	29.2	27.8	<div></div>	<div></div>
Labour productivity (% change on previous period)	2.4	6.4	4.4	1.5	1.5	1.6	2.3	2.2	3.6	4.6	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.1	4.4	4.4	4.3	4.1	4.1	4.1	4.1	4.1	4.0			
Judicial independence (1-7 (best))	4.1	4.3	4.3	4.2	4.1	4.1	4.2	3.8	3.2	2.8			
Rule of law (-2.5 to 2.5 (strong performance))	0.63	0.68	0.77	0.78	0.82	0.84	0.80	0.64	0.47	0.43			
Regulatory quality (-2.5 to 2.5 (strong performance))	0.95	0.98	0.93	0.96	1.05	1.05	1.00	0.95	0.88	0.88			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.03	1.04	1.03	1.06	1.00	1.11	1.04	0.84	0.78	0.72			
Trust in Government (% tend to trust)	16	29	28	23	19	26	20	26	29	33			
Trust in Parliament (% tend to trust)	11	25	25	20	17	21	19	23	22	26			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.05	7.12	7.12	7.12	7.47	7.09	6.83	6.67	6.67			
Political stability (-2.5 to 2.5 (strong performance))	0.94	1.02	1.07	1.05	0.97	0.84	0.87	0.51	0.52	0.55			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	51.9	50.3	53.6	49.1	50.9	47.1	52.4	49.1	52.3	52.1			
Tax compliance (0-10 (high))	6.36	6.68	6.79	6.79	6.79	6.96	6.96	7.09	6.26				
Year:					2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					73				76				
Undeclared work by firm for firm					74				78				
Undeclared work by individual for private household					60				63				
Undeclared work by firm for private household					70				73				
Someone partially or completely conceals their income					70				71				
Personally know people engaged in undeclared work (% 'yes')					28				31				



## PORTUGAL

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.16	1.01	0.95	1.04	1.23	0.99	1.22	1.21	1.33	1.21	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				63	62	63	64	62	63	64	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	1.09	1.09	1.11	0.96	0.95	0.95	0.96	0.93	0.87	0.85	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	16 600	16 990	16 680	16 010	16 300	16 640	17 350	18 060	19 020	19 830	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.817	0.822	0.827	0.829	0.837	0.840	0.843	0.846	0.848	0.850	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						84.23	84.35	84.81	85.61	85.83	<div></div>	<div></div>
Self-employment (% of total employment)	23.2	22.2	20.9	21.4	21.3	19.2	17.9	17.1	16.5	16.2	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	2.8	2.5	2.5	2.6	2.7	3.0	2.9	2.8	3.0	3.1	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	19.3	19.2	16.5	11.2	11.0	11.5	12.2	13.3	13.8		<div></div>	<div></div>
Business flexibility index (0-10 (high))	5.47	6.01	6.80	6.89	7.40	6.90	6.73	6.85	6.81		<div></div>	<div></div>
Expense of government (% of GDP)	43.7	44.0	44.3	44.2	45.4	47.5	43.8	41.2	41.4		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	1.58	1.54	1.46	1.38	1.32	1.29	1.24	1.28	1.32	1.35	<div></div>	<div></div>
Tax revenue (% of GDP)	19.2	19.7	21.2	20.9	22.7	22.7	22.9	22.4	22.5		<div></div>	<div></div>
Social contributions (% of revenue)	32.7	32.3	31.1	29.3	29.1	29.1	29.1	29.7	30.0		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	26.34	32.20	29.13	29.25	26.67	26.97	26.14	24.00	22.46	23.79	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	2.09	2.08	1.93	2.17	2.21	2.11	1.89	1.66	1.43	1.31	<div></div>	<div></div>
Unemployment rate (% of active population)	10.7	12.0	12.9	15.8	16.4	14.1	12.6	11.2	9.0	7.0	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	24.9	25.3	24.4	25.3	27.5	27.5	26.6	25.1	23.3	21.6	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	9.1	9.0	8.3	8.6	10.9	10.6	9.6	8.4	6.9	6.0	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	6.01	5.56	5.68	5.82	6.01	6.23	6.01	5.88	5.75	5.22	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	35.4	33.7	34.2	34.5	34.2	34.5	34.0	33.9	33.5	32.1	<div></div>	<div></div>
Labour productivity (% change on previous period)	-0.4	3.2	0.3	0.0	2.0	-0.6	0.4	0.4	0.2	0.1	<div></div>	<div></div>





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	5.0	5.1	5.0	5.2	5.2	5.3	5.3	5.7	5.7	5.8			
Judicial independence (1-7 (best))	4.7	4.3	3.9	3.9	4.2	4.5	4.6	4.7	4.9	4.8			
Rule of law (-2.5 to 2.5 (strong performance))	1.06	1.06	1.02	1.07	1.06	1.14	1.15	1.10	1.13	1.14			
Regulatory quality (-2.5 to 2.5 (strong performance))	0.99	0.72	0.63	0.83	0.80	0.75	0.96	0.84	0.91	0.89			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.13	1.11	1.11	1.03	1.07	1.11	1.13	1.16	1.21	1.20			
Trust in Government (% tend to trust)	32	19	24	22	15	17	15	39	51	43			
Trust in Parliament (% tend to trust)	41	27	22	23	15	20	19	36	42	37			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		8.02	7.81	7.92	7.65	7.79	7.79	7.86	7.84	7.84			
Political stability (-2.5 to 2.5 (strong performance))	0.79	0.72	0.74	0.78	0.75	0.81	0.92	0.97	1.12	1.14			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	51.0	52.6	50.5	49.1	52.6	53.5	54.9	54.0	54.0	56.0			
Tax compliance (0-10 (high))	6.66	6.92	6.92	6.92	6.92	6.92	7.28	7.28	7.28				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					81				84				
Undeclared work by firm for firm					82				86				
Undeclared work by individual for private household					72				78				
Undeclared work by firm for private household					82				84				
Someone partially or completely conceals their income					79				78				
Personally know people engaged in undeclared work (% 'yes')					28				36				

## ROMANIA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	-0.36	-0.27	-0.33	-0.31	-0.07	-0.03	-0.06	-0.17	-0.17	-0.25	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				44	43	43	46	48	48	47	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	-0.26	-0.23	-0.21	-0.26	-0.19	-0.11	-0.02	-0.02	-0.03	-0.12	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	6 150	6 190	6 550	6 640	7 190	7 550	8 090	8 650	9 580	10 510	■	■
Human Development Index (HDI) (0-1 (highest development))	0.798	0.797	0.798	0.796	0.800	0.803	0.806	0.808	0.813	0.816	■	■
Social Progress Index (SPI) (0-100 (high))						73.64	74.02	74.41	74.73	74.38	■	■
Self-employment (% of total employment)	20.8	22.6	20.9	21.2	21.1	20.5	19.4	18.1	18.1	17.3	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	3.0	2.9	2.8	2.8	2.8	3.2	3.1	2.7	2.6	2.9	■	■
Restrictive labour regulations (% of respondents)	2.8	5.2	2.8	3.3	2.8	4.9	4.7	2.6	1.8		■	■
Business flexibility index (0-10 (high))	6.78	7.38	7.28	7.54	7.66	7.56	7.57	7.55	7.48		■	■
Expense of government (% of GDP)	34.4	35.4	35.0	33.4	31.6	32.4	33.2	32.3	31.6		■	■
Research & Development expenditure (% of GDP)	0.44	0.46	0.50	0.48	0.39	0.38	0.49	0.48	0.50	0.51	■	■
Tax revenue (% of GDP)	15.3	16.6	18.1	17.9	17.6	17.9	18.9	16.7	15.4		■	■
Social contributions (% of revenue)	33.8	30.5	29.0	28.0	28.2	26.9	24.6	29.5	32.6		■	■
Impact of social transfers on poverty reduction (%)	23.00	22.30	23.63	20.49	18.44	12.85	13.31	14.24	16.61	16.07	■	■
Labour market policy (LMP) expenditure (% of GDP)	0.43	0.60	0.36	0.28	0.25	0.22	0.18	0.13	0.10		■	■
Unemployment rate (% of active population)	6.5	7.0	7.2	6.8	7.1	6.8	6.8	5.9	4.9	4.2	■	■
People at risk of poverty/social exclusion (% of total population)	43.0	41.5	40.9	43.2	41.9	40.3	37.4	38.8	35.7	32.5	■	■
Severe material deprivation rate (% of total population)	32.1	30.5	29.5	31.1	29.8	25.9	22.7	23.8	19.7	16.8	■	■
Inequality of income distribution (income quintile share ratio)	6.53	6.11	6.24	6.60	6.83	7.24	8.32	7.20	6.45	7.21	■	■
Gini coefficient (0-100 (perfect inequality))	34.5	33.5	33.5	34.0	34.6	35.0	37.4	34.7	33.1	35.1	■	■
Labour productivity (% change on previous period)	-1.9	-0.7	4.4	0.6	4.4	2.6	5.2	6.0	4.6	4.2	■	■





























III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.2	4.2	3.7	3.4	3.6	4.2	4.2	4.2	4.4	4.8	<div></div>	<div></div>	
Judicial independence (1-7 (best))	3.5	3.5	3.1	2.7	2.8	3.5	4.0	3.9	3.9	4.3	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	0.05	0.05	0.06	0.04	0.13	0.17	0.16	0.36	0.39	0.33	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	0.60	0.64	0.66	0.55	0.61	0.58	0.60	0.59	0.49	0.45	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	0.46	0.43	0.38	0.32	0.31	0.43	0.49	0.54	0.52	0.46	<div></div>	<div></div>	
Trust in Government (% tend to trust)	17	12	10	20	16	26	23	29	21	23	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	17	9	9	13	11	17	17	22	18	24	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		6.60	6.54	6.54	6.54	6.68	6.68	6.62	6.44	6.38	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	0.36	0.27	0.19	0.08	0.18	0.05	0.19	0.28	0.06	0.06	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	39.7	41.0	39.1	40.3	42.3	43.0	42.7	44.9	46.4	47.2	<div></div>	<div></div>	
Tax compliance (0-10 (high))	7.51	7.51	7.58	7.76	8.22	8.22	8.20	8.17	8.17		<div></div>	<div></div>	
Year:	2013					2019							
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis						80						70	<div></div>
Undeclared work by firm for firm						81						71	<div></div>
Undeclared work by individual for private household						64						61	<div></div>
Undeclared work by firm for private household						80						68	<div></div>
Someone partially or completely conceals their income						79						68	<div></div>
Personally know people engaged in undeclared work (% 'yes')						20						27	<div></div>

SLOVENIA												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	1.15	1.03	0.99	1.03	1.01	1.01	0.97	1.13	1.17	1.13	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				61	57	58	60	61	61	60	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	1.06	0.92	0.95	0.84	0.73	0.73	0.77	0.82	0.81	0.87	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	17 760	17 750	18 050	17 630	17 700	18 250	18 830	19 550	20 810	22 080	■	■
Human Development Index (HDI) (0-1 (highest development))	0.877	0.881	0.883	0.876	0.884	0.886	0.886	0.892	0.899	0.902	■	■
Social Progress Index (SPI) (0-100 (high))						83.46	83.67	84.64	85.54	85.44	■	■
Self-employment (% of total employment)	10.7	12.4	12.6	12.2	12.1	12.7	12.5	11.8	11.8	12.5	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	3.8	3.5	3.0	2.7	2.6	2.5	2.6	2.7	2.7	2.6	■	■
Restrictive labour regulations (% of respondents)	14.4	14.5	14.5	15.1	13.9	12.4	16.5	12.3	13.9		■	■
Business flexibility index (0-10 (high))	6.96	6.68	7.00	7.14	6.37	6.83	6.91	6.85	6.98		■	■
Expense of government (% of GDP)	41.5	42.4	43.8	42.3	52.7	43.6	42.1	40.3	38.0		■	■
Research & Development expenditure (% of GDP)	1.81	2.05	2.41	2.56	2.56	2.37	2.20	2.01	1.87	1.95	■	■
Tax revenue (% of GDP)	18.0	18.1	17.8	17.9	17.9	18.2	18.5	18.6	18.4		■	■
Social contributions (% of revenue)	39.8	39.7	39.4	39.1	37.8	37.3	36.8	38.4	38.5		■	■
Impact of social transfers on poverty reduction (%)	48.64	47.52	43.80	46.43	42.69	42.23	42.34	42.80	44.58	43.16	■	■
Labour market policy (LMP) expenditure (% of GDP)	0.98	1.19	1.26	1.12	1.20	1.00	0.76	0.73	0.68	0.61	■	■
Unemployment rate (% of active population)	5.9	7.3	8.2	8.9	10.1	9.7	9.0	8.0	6.6	5.1	■	■
People at risk of poverty/social exclusion (% of total population)	17.1	18.3	19.3	19.6	20.4	20.4	19.2	18.4	17.1	16.2	■	■
Severe material deprivation rate (% of total population)	6.1	5.9	6.1	6.6	6.7	6.6	5.8	5.4	4.6	3.7	■	■
Inequality of income distribution (income quintile share ratio)	3.24	3.42	3.46	3.44	3.60	3.70	3.60	3.56	3.42	3.38	■	■
Gini coefficient (0-100 (perfect inequality))	22.7	23.8	23.8	23.7	24.4	25.0	24.5	24.4	23.7	23.4	■	■
Labour productivity (% change on previous period)	-6.0	3.5	2.6	-1.7	0.1	2.3	0.9	1.3	1.8	0.9	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	4.8	4.7	4.4	4.7	5.0	4.9	4.9	5.5	5.3	5.4			
Judicial independence (1-7 (best))	4.4	4.2	3.8	3.8	3.6	3.4	3.5	3.7	3.7	3.6			
Rule of law (-2.5 to 2.5 (strong performance))	1.08	1.01	1.05	1.01	1.00	1.00	0.97	1.08	1.02	1.06			
Regulatory quality (-2.5 to 2.5 (strong performance))	0.92	0.76	0.70	0.63	0.63	0.66	0.63	0.64	0.58	0.69			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.06	1.05	1.06	1.00	1.00	0.96	0.99	1.01	1.00	0.99			
Trust in Government (% tend to trust)	29	18	12	15	10	13	16	17	17	23			
Trust in Parliament (% tend to trust)	19	16	10	12	6	9	11	14	17	22			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.69	7.76	7.88	7.88	7.57	7.57	7.51	7.50	7.50			
Political stability (-2.5 to 2.5 (strong performance))	0.93	0.87	0.97	0.94	0.88	0.97	0.95	0.99	0.87	0.91			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	61.0	57.5	60.1	57.9	56.5	55.3	56.6	56.6	56.9	59.0			
Tax compliance (0-10 (high))	7.09	7.09	7.09	7.09	7.09	7.25	7.25	7.25	7.39				
	Year:				2013				2019				
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					83				84				
Undeclared work by firm for firm					87				86				
Undeclared work by individual for private household					56				66				
Undeclared work by firm for private household					80				80				
Someone partially or completely conceals their income					78				76				
Personally know people engaged in undeclared work (% 'yes')					48				42				





























# SLOVAKIA

INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	0.87	0.84	0.83	0.84	0.79	0.88	0.84	0.89	0.80	0.71	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				46	47	50	51	51	50	50	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	0.27	0.29	0.28	0.10	0.08	0.16	0.18	0.23	0.22	0.36	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	11 830	12 540	13 190	13 590	13 740	14 070	14 710	14 920	15 540	16 470	■	■
Human Development Index (HDI) (0-1 (highest development))	0.823	0.829	0.836	0.841	0.844	0.845	0.849	0.851	0.854	0.857	■	■
Social Progress Index (SPI) (0-100 (high))						78.68	78.94	79.80	79.54	80.16	■	■
Self-employment (% of total employment)	15.5	15.8	15.9	15.4	15.5	15.3	15.0	15.3	15.2	14.7	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.4	2.5	■	■
Restrictive labour regulations (% of respondents)	16.4	14.8	11.0	6.4	13.6	14.5	11.3	8.9	8.8		■	■
Business flexibility index (0-10 (high))	7.45	7.42	7.57	7.41	7.42	7.54	7.44	7.58	7.59		■	■
Expense of government (% of GDP)	41.6	39.5	38.7	38.5	39.4	39.7	40.6	40.2	39.0		■	■
Research & Development expenditure (% of GDP)	0.47	0.61	0.66	0.80	0.82	0.88	1.16	0.79	0.89	0.84	■	■
Tax revenue (% of GDP)	15.5	14.9	15.4	14.8	15.9	16.7	17.4	17.5	17.8		■	■
Social contributions (% of revenue)	36.2	37.2	35.5	36.5	36.9	36.5	34.6	38.3	39.2		■	■
Impact of social transfers on poverty reduction (%)	35.67	39.39	33.33	34.00	36.32	35.71	35.26	30.98	29.14	31.07	■	■
Labour market policy (LMP) expenditure (% of GDP)	0.91	0.91	0.77	0.68	0.62	0.55	0.52	0.59	0.55	0.54	■	■
Unemployment rate (% of active population)	12.1	14.5	13.7	14.0	14.2	13.2	11.5	9.7	8.1	6.5	■	■
People at risk of poverty/social exclusion (% of total population)	19.6	20.6	20.6	20.5	19.8	18.4	18.4	18.1	16.3	16.3	■	■
Severe material deprivation rate (% of total population)	11.1	11.4	10.6	10.5	10.2	9.9	9.0	8.2	7.0	7.0	■	■
Inequality of income distribution (income quintile share ratio)	3.56	3.80	3.81	3.73	3.58	3.93	3.54	3.63	3.49	3.03	■	■
Gini coefficient (0-100 (perfect inequality))	24.8	25.9	25.7	25.3	24.2	26.1	23.7	24.3	23.2	20.9	■	■
Labour productivity (% change on previous period)	-3.6	7.3	1.1	1.8	1.5	1.3	2.8	-0.3	0.8	2.0	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	3.6	3.8	3.8	3.9	3.6	3.6	3.6	3.6	3.5	3.4			
Judicial independence (1-7 (best))	3.5	2.9	2.7	2.7	2.3	2.3	2.6	2.8	2.8	2.8			
Rule of law (-2.5 to 2.5 (strong performance))	0.54	0.57	0.61	0.49	0.48	0.50	0.50	0.65	0.57	0.53			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.05	1.00	1.00	1.05	0.93	0.89	0.79	0.89	0.82	0.81			
Voice and accountability (-2.5 to 2.5 (strong performance))	0.88	0.91	0.97	0.97	0.96	0.96	0.97	0.96	0.94	0.88			
Trust in Government (% tend to trust)	36	36	21	32	29	27	33	32	28	32			
Trust in Parliament (% tend to trust)	35	37	25	30	28	26	29	29	28	29			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		7.35	7.35	7.35	7.35	7.35	7.29	7.29	7.16	7.10			
Political stability (-2.5 to 2.5 (strong performance))	0.92	1.05	0.97	1.09	1.12	1.04	0.87	0.72	0.91	0.75			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	43.8	44.0	45.2	47.1	46.0	45.6	46.5	46.8	50.3	52.6			
Tax compliance (0-10 (high))	7.12	7.41	7.68	7.68	7.68	7.89	7.85	7.85	7.85				
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					73					69			
Undeclared work by firm for firm					73					70			
Undeclared work by individual for private household					51					61			
Undeclared work by firm for private household					63					66			
Someone partially or completely conceals their income					68					67			
Personally know people engaged in undeclared work (% 'yes')					36					30			



FINLAND												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	2.23	2.23	2.24	2.22	2.17	2.00	1.81	1.83	1.94	1.98	■	■
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				90	89	89	90	89	85	85	■	■
Control of corruption (-2.5 to 2.5 (strong performance))	2.25	2.16	2.20	2.24	2.20	2.17	2.28	2.24	2.22	2.21	■	■
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	34 040	35 080	36 750	37 130	37 570	37 880	38 570	39 580	41 000	42 490	■	■
Human Development Index (HDI) (0-1 (highest development))	0.899	0.903	0.907	0.908	0.916	0.918	0.919	0.922	0.924	0.925	■	■
Social Progress Index (SPI) (0-100 (high))						88.67	88.98	88.77	89.34	89.17	■	■
Self-employment (% of total employment)	13.1	12.8	12.9	13.1	13.0	13.5	13.8	13.5	12.8	12.8	■	■
2. State intervention												
Burden of government regulation (1-7 (best))	4.3	4.3	4.4	4.8	5.0	4.5	4.2	4.5	4.7	4.6	■	■
Restrictive labour regulations (% of respondents)	21.6	21.9	23.3	19.3	23.8	21.2	22.9	29.4	27.3		■	■
Business flexibility index (0-10 (high))	7.59	7.88	8.01	7.93	7.73	7.77	7.68	7.72	7.89		■	■
Expense of government (% of GDP)	38.2	38.4	37.9	38.9	40.1	40.5	40.2	39.5	37.9		■	■
Research & Development expenditure (% of GDP)	3.73	3.71	3.62	3.40	3.27	3.15	2.87	2.72	2.73	2.75	■	■
Tax revenue (% of GDP)	18.9	18.6	20.0	20.1	20.6	20.6	20.5	20.8	20.8		■	■
Social contributions (% of revenue)	33.6	33.9	32.5	33.6	33.2	33.4	33.7	33.7	32.5		■	■
Impact of social transfers on poverty reduction (%)	47.33	51.48	50.00	50.93	55.30	53.62	53.73	57.04	56.93	53.67	■	■
Labour market policy (LMP) expenditure (% of GDP)	2.62	2.67	2.35	2.35	2.57	2.84	2.89	2.77	2.53	2.18	■	■
Unemployment rate (% of active population)	8.2	8.4	7.8	7.7	8.2	8.7	9.4	8.8	8.6	7.4	■	■
People at risk of poverty/social exclusion (% of total population)	16.9	16.9	17.9	17.2	16.0	17.3	16.8	16.6	15.7	16.5	■	■
Severe material deprivation rate (% of total population)	2.8	2.8	3.2	2.9	2.5	2.8	2.2	2.2	2.1	2.8	■	■
Inequality of income distribution (income quintile share ratio)	3.71	3.61	3.69	3.69	3.59	3.62	3.56	3.58	3.54	3.65	■	■
Gini coefficient (0-100 (perfect inequality))	25.9	25.4	25.8	25.9	25.4	25.6	25.2	25.4	25.3	25.9	■	■
Labour productivity (% change on previous period)	-5.7	3.8	0.9	-2.2	-0.1	0.1	0.6	2.2	2.0	-0.9	■	■

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	6.6	6.6	6.7	6.6	6.7	6.7	6.7	6.8	6.8	6.8			
Judicial independence (1-7 (best))	6.5	6.3	6.4	6.5	6.6	6.6	6.6	6.7	6.8	6.7			
Rule of law (-2.5 to 2.5 (strong performance))	1.97	1.97	1.95	1.95	1.94	2.10	2.06	2.02	2.03	2.05			
Regulatory quality (-2.5 to 2.5 (strong performance))	1.81	1.88	1.82	1.83	1.85	1.88	1.84	1.82	1.82	1.79			
Voice and accountability (-2.5 to 2.5 (strong performance))	1.47	1.49	1.51	1.60	1.57	1.54	1.54	1.53	1.55	1.61			
Trust in Government (% tend to trust)	48	51	56	62	50	47	49	58	56	53			
Trust in Parliament (% tend to trust)	53	54	58	66	58	61	58	63	62	63			
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		9.19	9.06	9.06	9.03	9.03	9.03	9.03	9.03	9.14			
Political stability (-2.5 to 2.5 (strong performance))	1.46	1.42	1.39	1.40	1.39	1.28	1.04	1.00	1.08	0.92			
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	72.9	72.6	73.1	73.5	72.9	72.4	73.8	74.1	73.9	77.6			
Tax compliance (0-10 (high))	7.28	8.96	8.96	8.96	8.96	8.96	8.96	8.96	8.99				
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					92					92			
Undeclared work by firm for firm					94					94			
Undeclared work by individual for private household					76					72			
Undeclared work by firm for private household					93					90			
Someone partially or completely conceals their income					93					89			
Personally know people engaged in undeclared work (% 'yes')					30					26			

SWEDEN												
INDICATOR	YEAR:										TREND 2009 vs. 2018	TREND 2016- 2018
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
A. FORMAL INSTITUTIONS												
I. FORMAL INSTITUTIONAL RESOURCE MISALLOCATIONS AND INEFFICIENCIES												
1. Level of modernisation of government												
Government effectiveness (-2.5 to 2.5 (strong performance))	2.05	2.00	1.97	1.96	1.91	1.80	1.82	1.77	1.84	1.83	<div></div>	<div></div>
2. Formal institutions acting in a corrupt manner												
Corruption Perceptions Index (CPI) (0-100 (very clean))				88	89	87	89	88	84	85	<div></div>	<div></div>
Control of corruption (-2.5 to 2.5 (strong performance))	2.25	2.27	2.20	2.31	2.29	2.15	2.24	2.19	2.14	2.14	<div></div>	<div></div>
II. FORMAL INSTITUTIONAL VOIDS AND WEAKNESSES												
1. Modernisation Explanation - Level of 'development'												
GDP (current prices, euro per capita)	33 730	39 920	43 590	45 050	45 850	45 130	46 350	47 000	47 690	46 310	<div></div>	<div></div>
Human Development Index (HDI) (0-1 (highest development))	0.899	0.906	0.906	0.908	0.927	0.929	0.932	0.934	0.935	0.937	<div></div>	<div></div>
Social Progress Index (SPI) (0-100 (high))						88.25	88.37	88.52	89.09	88.80	<div></div>	<div></div>
Self-employment (% of total employment)	10.5	10.7	10.2	10.2	10.4	10.1	10.0	9.7	9.6	9.4	<div></div>	<div></div>
2. State intervention												
Burden of government regulation (1-7 (best))	4.0	4.0	3.9	4.0	4.1	4.0	4.1	4.1	4.1	4.3	<div></div>	<div></div>
Restrictive labour regulations (% of respondents)	22.2	25.5	24.1	15.4	20.8	13.5	23.2	20.1	14.8		<div></div>	<div></div>
Business flexibility index (0-10 (high))	7.50	8.16	8.22	8.26	8.21	8.11	8.24	8.23	8.05		<div></div>	<div></div>
Expense of government (% of GDP)	33.0	32.4	31.6	32.2	33.0	32.5	31.5	31.3	31.1		<div></div>	<div></div>
Research & Development expenditure (% of GDP)	3.41	3.17	3.19	3.24	3.27	3.11	3.23	3.25	3.37	3.31	<div></div>	<div></div>
Tax revenue (% of GDP)	26.6	26.7	26.0	25.7	26.0	26.0	26.7	27.6	27.6		<div></div>	<div></div>
Social contributions (% of revenue)	9.3	8.9	9.4	9.7	9.7	9.7	9.4	9.2	9.2		<div></div>	<div></div>
Impact of social transfers on poverty reduction (%)	50.00	48.97	48.32	47.59	44.64	48.00	45.30	45.82	46.08	43.25	<div></div>	<div></div>
Labour market policy (LMP) expenditure (% of GDP)	1.73	1.82	1.72	1.87	1.99	1.90	1.78	1.69	1.63	1.54	<div></div>	<div></div>
Unemployment rate (% of active population)	8.3	8.6	7.8	8.0	8.0	7.9	7.4	6.9	6.7	6.3	<div></div>	<div></div>
People at risk of poverty/social exclusion (% of total population)	17.8	17.7	18.5	17.7	18.3	18.2	18.6	18.3	17.7	18.0	<div></div>	<div></div>
Severe material deprivation rate (% of total population)	2.0	1.9	1.7	1.8	1.9	1.0	1.1	0.8	1.1	1.6	<div></div>	<div></div>
Inequality of income distribution (income quintile share ratio)	3.96	3.85	3.95	3.98	3.97	4.15	4.06	4.25	4.27	4.13	<div></div>	<div></div>
Gini coefficient (0-100 (perfect inequality))	26.3	25.5	26.0	26.0	26.0	26.9	26.7	27.6	28.0	27.0	<div></div>	<div></div>
Labour productivity (% change on previous period)	-2.2	5.5	0.7	-1.4	0.1	1.3	2.9	0.6	0.0	0.6	<div></div>	<div></div>

III. FORMAL INSTITUTIONAL POWERLESSNESS													
Reliability of police services (1-7 (best))	6.2	6.1	6.3	6.1	5.9	5.7	5.7	5.7	5.3	5.2	<div></div>	<div></div>	
Judicial independence (1-7 (best))	6.6	6.6	6.5	6.2	6.2	5.7	5.9	6.5	6.1	5.7	<div></div>	<div></div>	
Rule of law (-2.5 to 2.5 (strong performance))	1.97	1.96	1.94	1.95	1.97	1.99	2.04	2.02	1.94	1.90	<div></div>	<div></div>	
Regulatory quality (-2.5 to 2.5 (strong performance))	1.65	1.66	1.90	1.91	1.91	1.81	1.82	1.85	1.80	1.80	<div></div>	<div></div>	
Voice and accountability (-2.5 to 2.5 (strong performance))	1.55	1.54	1.61	1.69	1.66	1.61	1.57	1.56	1.58	1.61	<div></div>	<div></div>	
Trust in Government (% tend to trust)	55	63	61	59	57	54	55	56	66	60	<div></div>	<div></div>	
Trust in Parliament (% tend to trust)	63	71	71	68	70	67	69	66	73	73	<div></div>	<div></div>	
IV. FORMAL INSTITUTIONAL INSTABILITY AND UNCERTAINTY													
Democracy Index (0-10 (full democracy))		9.50	9.50	9.73	9.73	9.73	9.45	9.39	9.39	9.39	<div></div>	<div></div>	
Political stability (-2.5 to 2.5 (strong performance))	1.09	1.09	1.23	1.17	1.13	1.07	0.95	1.02	0.98	0.91	<div></div>	<div></div>	
B. INFORMAL INSTITUTIONS													
Social capital (0-100 (high))	72.5	73.4	75.4	74.0	74.5	73.2	73.8	73.4	71.7	73.1	<div></div>	<div></div>	
Tax compliance (0-10 (high))	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63		<div></div>	<div></div>	
Year:					2013					2019			
Acceptability of undeclared work (% total 'unacceptable')													
Firm hires worker on undeclared basis					95					92			<div></div>
Undeclared work by firm for firm					96					94			<div></div>
Undeclared work by individual for private household					65					63			<div></div>
Undeclared work by firm for private household					94					92			<div></div>
Someone partially or completely conceals their income					94					87			<div></div>
Personally know people engaged in undeclared work (% 'yes')					39					44			<div></div>

**TREND** (2016-2018):

■ = positive    ■ = unchanged    ■ = negative    ■ = uncertain