Informal employment and the social contract: An individual-level perspective

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Abstract

This paper empirically tests whether individual-level informality status is linked to a weak social contract, as measured through individual perceptions of its various aspects. Accounting for workers' heterogeneity and a possible simultaneity between informality status and attitudes towards institutions, the paper shows that informal workers are systematically more dissatisfied with the social contract, as compared to formal workers. The paper enriches the literature by looking at a broad range of aspects of the social contract. The results show that informality is associated with a lower level of confidence in labour unions, in parliament, in civil services; a lower satisfaction with the healthcare system, the way the government performs its duties, the quality of healthcare, and the city setting. The paper concludes with some policy implications.

Résumé

Cet article teste empiriquement si le fait de travailler de manière informelle peut être lié à une défiance personnelle vis-à-vis du contrat social. En tenant compte de l'hétérogénéité des travailleurs et d'une possible concomitance entre le statut d'informalité et les attitudes envers les institutions, l'article montre que les travailleurs informels ont systématiquement plus de défiance vis-à-vis du contrat social que les travailleurs formels. L'article complète la littérature existante en examinant de nombreux aspects du contrat social. Les résultats montrent que l'informalité s'avère être liée à une défiance envers les syndicats, le parlement, les services publics; à une satisfaction moins élevée à l'égard du système de santé, de la manière dont le gouvernement remplit ses fonctions, de la qualité des soins de santé et des aménagements urbains. Le document conclut sur les implications en matière de politiques publiques.

Foreword

Informality has been at the heart of the OECD Development Centre's work since its creation. Recent milestones include its seminal report *Is Informal Normal?* (2009), which framed the Multi-Dimensional Reviews of countries such as Paraguay and Peru. Published jointly with the International Labour Organization (ILO) in 2019, the follow-up report *Tackling Vulnerability in the Informal Economy* remains a reference for the Centre's and its partners' contributions to building more cohesive societies. Since then, the Centre has created innovative, comparative data on informality, released as the *Key Indicators of Informality based on Individuals and their Household* (KIIbIH) database in 2021. It plays an active role in the ILO Working Group for the Revision of the Standards for Statistics on Informality, and in the Global Partnership for Universal Social Protection (USP2030).

This paper is produced in the context of the OECD Development Centre project "Tackling the Vulnerability of Informal Workers and their Household Members". The objective is to advance knowledge about the causes and consequences of informal employment, and about policies that can effectively improve working conditions of informal economy workers, as well as their chances for formalisation. An additional aim is to highlight the staggering impact of the COVID-19 crisis on their health, employment and income, and the repercussions on their family members, in a context where most do not benefit from employment-based social protection. This has raised important concerns about social cohesion and the sustainability of social contracts throughout the world, especially in places where social contracts were weak even before the pandemic, and not reflecting the needs of all citizens.

To that end, the paper explores the linkages between workers' (in)formality status and their perceptions of various aspects of the social contract. Its results reinforce our understanding that a resilient, sustainable, and inclusive recovery from the COVID-19 crisis is impossible without strengthening institutions, as well as health and social protection systems, especially in countries with a large informal workforce. This is one of the priority actions of the "New Deal for development", agreed at the High Level Meeting of the Governing Board of the OECD Development Centre in October 2020.

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1 Introduction

Informal employment is a defining feature of labour markets in developing countries, concerning over 70% of all employment. Regardless of its causes[1], there is growing recognition that informality is the sign of a weak social contract – a situation in which citizens perceive that the state is not playing its role (OECD, 2018[4]; OECD, 2021[5]; Perry et al., 2007[6]; OECD, 2012[7]), and that there is a misalignment between formal institutions and social informal practices (Iyanatul and Frédéric, 2020[8]; Williams, Horodnic and Windebank, 2015[9]).

The social contract is hard to measure empirically. The linkages between social contract and informality have been shown by empirically relating informality to institutional quality (Schneider and Enste, 2000[10]); to regulatory quality and public trust (Iyanatul and Frédéric, 2020[8]); to governance and perceptions of corruption (Buehn and Schneider, 2012[11]; Dreher and Schneider, 2010[12]; Dutta, Kar and Roy, 2013[13]; Friedman et al., 2000[14]; Schneider and Enste, 2000[10]); to taxes and political turnover (Elgin, 2015[15]); to direct democratic institutions (Teobaldelli and Schneider, 2013[16]); to political instability (Elbahnasawy, Ellis and Adom, 2016[17]); to business and political environment (Devine, 2021[18]); to tax morale (Alm and Torgler, 2006[19]; Torgler and Schneider, 2009[20]), or to several of these aspects at the same time (Torgler and Schneider, 2007[21]).

This literature, however, has some limitations. The majority of these studies were conducted on a macroeconomic level. They generally recognise that the causality may run both ways between informality, and perceptions of and attitudes towards institutions. However, these studies omit the fact that the informal economy is highly heterogeneous, as are informal workers (OECD/ILO, 2019[1]). Indeed, an informal worker is not only characterised by his or her economic activity, s(he) is also a citizen, a parent, a member of a household that may include other informal or formal economy workers, and a member of the community. Individual informality status, as well as perceptions regarding the social contract, can thus vary depending on these roles.

Microeconomic analysis could better identify the linkages between informality and the social contract by controlling for a range of individual characteristics. However, existing studies performed on the micro level only examine the link between individual perceptions of institutions and informality, considering informality as an independent variable (Başbay, Elgin and Torul, 2018[22]; Williams, Horodnic and Windebank, 2015[9]; Williams, Shahid and Martínez, 2016[23]; Williams and Oz-Yalaman, 2020[24]). As such, they view informality as a choice, an exit strategy from a poor social contract. By doing so, they disregard two facts: informality may be a constrained outcome, and an informal status may affect attitudes towards institutions, as suggested by the macroeconomic literature.

This paper aims to bridge these strands of literature. First, by applying microeconomic analysis, and by controlling for numerous individual-level characteristics (including status in employment and sector of activity) the paper better identifies the linkages between informality and institutional attitudes as compared to macro-level studies.

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[1] For recent reviews of the causes of informality, see (OECD/ILO, 2019[1]; IMF, 2021[2]; World Bank Group, 2021[3]).

Second, in contrast to earlier studies performed on the micro level, the paper explicitly recognises that the informality status of workers can be affected by attitudes towards institutions (i.e. it can be a choice, an "exit strategy"), but also that this informality status per se can affect attitudes towards institutions. As shown in this paper, many workers do not choose between formal or informal work: they take any job available. Indeed, many workers prefer formal jobs, and their informal status is a constrained outcome in the context of tight labour markets and a general lack of jobs. At the same time, because the quality of informal jobs is often inferior to that of formal jobs, workers in these jobs feel more disadvantaged in general. They perceive social injustice more acutely and consider more systematically than formal workers that the social contract is broken. While this paper is not aiming to establish the exact, let alone the only, direction of causality between informality and social contract, it demonstrates empirically that causality can plausibly run from informality to perceptions of institutions. Given this, informality itself can be seen as a sign of a weak social contract.

In addition, the paper exploits a substantially richer set of measures than other studies, which can be jointly considered as reflecting different aspects of social contract. They include: confidence in nine types of institutions; four measures of what constitutes justifiable behaviour; individual opinions about government performance in five areas; satisfaction with six different aspects of the country's system, and satisfaction with six types of publically provided services. As such, the paper examines linkages between informality and those aspects of the social contract not previously studied, including satisfaction with education and health systems and with the quality of services they provide– the building blocks of social cohesion and development prospects. By doing so, the paper also allows to establish, within the same sample, the hierarchy of relevance of specific aspects of institutions and public services for informality status, as well as for different types of informal workers. This allows for policy recommendations better tailored to the specific needs of informal workers.

The paper is based on a special module of the World Values Survey (WVS), conducted in 2018 in four countries in the Middle East and North Africa (MENA) region: Egypt, Iraq, Jordan, and Lebanon. The WVS has been widely used in previous studies to compute country-level average values of various attitudinal questions, and to relate them to the aggregate levels of informality obtained from other sources. However, only the most recent special WVS module contains a question allowing to deduce the individuals' informality status, enabling the individual-level analysis of this paper. Based on the available information, informal workers are defined as those who do not enjoy social security contributions.

The paper finds that informality is an important predictor of the lack of confidence in labour unions, in parliament, in civil services; of lower satisfaction with the healthcare system, with the way the government performs its duties, with the quality of healthcare, and with the city setting. In contrast, informality does not predict measures of (non-) justifiable behaviour or tax morale, which are often considered as affecting the choice of informal employment (Alm and Torgler, 2006[19]; Torgler and Schneider, 2009[20]).

Our paper is similar in several ways to the paper by Başbay, Elgin and Torul (2018[20]). These authors also work with the WVS data, though for the year 2012, and examine linkages between informality and political acts and beliefs. Several differences between our papers are, however, of order. First, Başbay, Elgin and Torul (2018[20]) use a different definition of informality, which refers to the informal sector work. Second, they consider informality as an independent variable. While the possibility of the reverse causality is acknowledged, it is not empirically tested for. Third, they are operating with a different set of political attitudes and behaviours, without framing them into the social contract perspective. As a result of these differences, our findings differ as well: (Başbay, Elgin and Torul, 2018[22]) report a statistically significant, positive association between informal sector employment and confidence in government institutions, while we find the opposite, and robust, effect.

Finally, to the best of our knowledge, this paper looks for the first time ever at the links between informality and institutions within the context of the MENA region. Earlier studies focused on Eastern and Western

Europe (Williams and Horodnic, 2015[25]; Williams and Oz-Yalaman, 2020[24]) and Latin America (Perry et al., 2007[7]), or on comparisons between selected countries.

The rest of the paper is organised as follows. Section 2 outlines theoretical linkages between informal employment and the social contract. Section 3 discusses these linkages in the context of the countries of our sample. Section 4 describes the data used for the analysis. Section 5 provides descriptive statistics. Section 6 provides an empirical test of the linkages between informality and social contract. The last section discusses these empirical findings and their policy implications.

2 Informal employment and social contract: What are the linkages?

Informality is a complex dynamic phenomenon, driven by many factors. Previous studies have shown that informality is linked to the structural features of the economy, the level of economic development, as well as regulations in a given country (OECD/ILO, 2019[1]). In addition to this, an institutional and attitudinal set of factors received particular attention (IMF, 2021[2]; World Bank Group, 2021[3]). In many parts of the world, informal employment is often seen as the sign of a weak social contract (OECD, 2018[5]).

The social contract concept is broader than the sum of country-specific regulations and institutions. It is understood as an accord between the state and the citizens, characterised by explicit and implicit agreements on what individuals and different socio-economic groups give to and receive from the state. A social contract is the product of the history of a country, but also of the histories of its populations and their interactions over decades. It is the result of a continuum of power relations, especially between the state and citizens. A strong social contract between the state and its citizens is a sine qua non condition for sustaining development through time (Bussolo et al., 2018[26]; OECD, 2012[7]). One of the main components of social contract is the agreement that citizens pay taxes and social security contributions, comply with the laws, and in exchange receive good quality legal environment, public services, as well as better economic opportunities, including more and better jobs. Social contracts are strong when citizens perceive that the pact with the state is reliable, beneficial for them, and fair. Conversely, social contracts are weak, when citizens see it as non-reliable, non-beneficial, or unfair. The latter is manifested by low satisfaction with the quality of state-provided services, low trust and confidence in public institutions, and may be aggravated by the perception of sizeable corruption. The solidity of the social contract can also be affected by a variety of factors, including the economic cycle.

Low satisfaction with the quality of publically provided services can set a spiral of higher informality – lower quality of services and lower tax morale (OECD, 2019[27]) – higher informality. The mechanism for this dynamics is the following (OECD, 2012[7]; Oviedo, Thomas and Karakurum-Ozdemir, 2009[28]; Perry et al., 2007[6]; World Bank, 2017[29]). Individuals with high income, as well as businesses, who are dissatisfied with the quality of provided services, have lower incentives to fulfil their obligations in the social contract through paying taxes or social security contributions. They may "exit" the formal economy: they opt out of contributing to and consuming state-provided services, and substitute them with private services. In doing so, they may choose to demand and perform informal activities (including under-reported, undeclared, or partially declared) as rational and justifiable, in order not to double pay for the public and for private services. This leads to a decline in state receipts, undermines the state's capacity to improve the quality of public services, such as access to good quality water and air, health, education, or justice. As a result, there is also a growing dissatisfaction of those individuals and businesses who could not afford to opt out, as well as those who are excluded from the formal economy, either because they are not covered by laws, or because for them informal employment is a constrained option. This worsens the fracturing of society, and further erodes the social contract (Ferreira et al., 2013[30]). Moreover, as the tax base narrows, the state may be obliged to levy higher taxes (such as VAT) in order to cover the non-complying, at the risk of rendering compliance too costly for poor and vulnerable workers and firms (OECD, 2012[7]; OECD, 2018[4]).

The outcome is inconsistency between workers' demand and institutional supply of both social protection and high-quality public services. It is a narrow-based equilibrium of high tax, sizeable evasion of taxes and social security contributions, high inequality, low trust, low satisfaction with the quality of publicly provided services, and high informality.

Whether informality is indeed a sign of a weak social contract can be tested by relating informality to various aspects of the social contract. However, the informal economy is highly heterogeneous (OECD/ILO, 2019[1]). The plurality of informal workers' profiles means that the needs and incentives to formalise are heterogeneous, and individual interactions with the social contract are non-uniform. Different individual characteristics, but also other roles of the individual – being a worker, a parent, a resident of a specific area, a member of the community – can shape both "exclusion" and "exit" from formal employment, and give a different perception of the relevance of different aspects of the social contract. Some characteristics, such as employment status, would be particularly important: for an employee, the status of formality likely depends on the choice of the employer, rather than his own choice.

Conversely, the state also has many faces: it is a system of regulations and legal frameworks, characterised by different degrees of accountability and transparency, but it is also represented by politicians and lawmakers, and by the system of publically provided services. It is therefore useful to measure the perceptions of the state, and of the social contract, through a panoply of indicators capturing this heterogeneity.

3 The context of labour markets in Egypt, Iraq, Jordan and Lebanon

To better understand the linkages between informality and the social contract in our data, it is important to understand the context of these data. This paper is based on data collected in 2018. At that time, the countries of our sample – Egypt, Iraq, Jordan, and Lebanon – were quite different in terms of their labour markets and economic cycles. Yet, with respect to informality and the social contract, they shared a set of common challenges: labour market dynamics shaped by the demographic transition, structural transformation, and political instabilities.

First, two countries of our sample – Egypt and Iraq – were in the third stage of their demographic transitions, meaning that the decline in fertility had not yet fully matched the decline in mortality. The population was relatively young, and there was a significant inflow of young new entrants into the labour market. This inflow was confronted with a shortage of labour demand, and especially of good-quality jobs allowing for a correct skill match (Assaad and Krafft, 2016[31]). As a result, there was substantial unemployment among youth, and an important share of "not in education, employment or training" (NEET) individuals. Competition for available jobs was high; many workers did not have a choice over the type of contracts or the quality of jobs, and were constrained to take any job available. If informality status could be considered as a "choice" for some workers, it was clearly a sub-optimal, constrained outcome for many others, an outcome of the lack of formal employment opportunities. In Jordan, while fertility rates had been falling, the population still remained relatively young and faced similar challenges. The Lebanese population was more mature, but was strongly shaped by out-migration and by an inflow of refugees.

Second, all countries except Lebanon were characterised by a rather large share of jobs in agriculture, most often informal. At the same time, they were also characterised by a process of structural transformation shifting jobs from agriculture directly to services (including tourism and commerce) rather than to manufacturing. Many of these jobs were in small and medium enterprises of family type, with low access to finance. This process resulted in a disproportionate creation of low-quality jobs in low value-added sectors. As such, it perpetuated rather than reduced the number of informal jobs (Angel-Urdinola et al., 2012[32]). At the same time, the public sector was quite large, employing 15% of all workers in Lebanon, 23% in Egypt, 27% in Jordan, and 38% in Iraq (ILOSTAT, 2021[33]). The jobs in the public sector were usually formal, even though it was not uncommon to find some informal employment relationships, especially in peripheral jobs such as cleaning, security, gardening also in the public sector (see evidence reported by (ONMT, 2020[34]). The result was a certain duality of the labour markets, where public sector jobs were a primary source of formal jobs and aspired to by many, while private sector jobs would feature substantially higher informality rates and work deficits, and seen by many as a second-best choice. Indeed, in our sample, 48% of all respondents indicated that they would prefer to work as public sector employees, rather than as private sector employees or self-employed – a share substantially larger as compared to the share of actually employed in the public sector. Among informal workers, 53% of the respondents indicated this preference.

Third, political and economic instabilities, including the aftermath of the Arab Spring, continued to affect both the incidence of informality and of social discontent. In Egypt, unemployment, and especially youth unemployment, was already high during the pre-revolution era, pushing many unemployed workers into

informal subsistence jobs (Assaad, Ghazouani and Krafft, 2017[35]; Elsayed and Wahba, 2017[36]). There is evidence that informal employment increased overall after the Arab Spring in this country (Elsayed and Wahba, 2017[36]). In Iraq and Lebanon, low levels of public spending, political upheavals, and several wars over the last 40 years have undermined the provision of basic services and infrastructure, including schools (GIZ, 2019[37]). The latter amplified discontent with public services, but also led to the increasing incidence of child labour, most of which is informal. While the underlying causes of informality differed across the MENA region depending on the regulatory framework and the system of monitoring and enforcement established by governments (Elbadawi and Loayza, 2008[38]), political instability fuelled it in all countries. Informality also symbolised the weakness of the social contract between the government and workers (El-Haddad, 2020[39]).

Of course, the specific colonial and authoritarian histories of the countries considered in this paper have shaped their social contracts, as well as the expectations of the citizens from the state (Hinnebusch, 2020[40]; OECD, 2021[5]). These specificities must be kept in mind when transposing the findings of this paper to other countries.

4 Data description

Sample description and dependent variables

The analysis of this paper is based on the World Value Survey, wave 7. A special module for four countries – Egypt, Jordan, Iraq, Lebanon – conducted in 2018 contained the question of whether the respondents were registered with the national social security agency of their country. By allowing proxying whether employment is formal or not, this question is the cornerstone of the analysis in this paper. It was asked both to wage employees and to self-employed. For wage employees, the question refers to the registration through their employer. For self-employed, presumably, the question refers to whether the self-employed themselves are making the necessary social security contributions. Both wage employees and self-employed replied to this question. In this paper, those workers who indicated that they were not registered with the national social security agency of their country are considered informal. Wage employees, both part-time and full-time, represent 77.54% of the sample; 53.93% of them report being not registered (informal). Self-employed represent 22.46% of the sample; 82.44% of them report being not registered (informal).

The question on social security contributions is available only in this special module, limiting the analysis to these four countries. To allow for the greatest number of observations, the data for four countries are pooled. Since informal employment concerns only those employed, the sample is restricted to men and women who report working. It is further restricted to individuals aged 18 to 64, with all non-missing socio-economic characteristics. The final sample contains 2231 observations.

Measuring the strength of the social contract

The social contract is a philosophical rather than a tangible concept. As a consequence, there is no unique way to measure it. Moreover, it is a multifaceted concept, which may be measured from different perspectives: the confidence in different types of institutions, the assessment of how they function, or the perception of the fairness of "giving and receiving". In this paper, we exploit a very rich set of questions of the WVS measuring different types of attitudes towards public institutions and publically provided services, which can be considered as different aspects of social contract. The retained questions are grouped into five sets:

1)   Confidence: nine questions, asking about the degree of confidence the person has in the armed forces, in the press, in the labour unions, in the police, in justice, in the government, in political parties, in the parliament, and in the civil services[2]. The answers are measured on a scale from 1 to 4, where 4 refers

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[2] The survey contains several other questions about confidence (26 in total), such as for example the degree of confidence in churches or banks. They were not retained for this analysis, as (arguably) they represent less relevant aspects of the social contract.

to a great deal of confidence, and 1 to no confidence at all (we expect a negative relationship between these variables and informality)[3].

2)   Justifiable: four questions, asking how often it is justifiable to claim government benefits without being entitled to them, avoid a fare on public transportation, cheat on taxes if there is a chance, or accept a bribe in the course of duties. The answers are measured on a scale from 1 to 10, where 1 refers to "never justified", and 10 – always justified (we expect a positive relationship between these variables and informality).

3)   Government performance: five questions, asking the respondents to assess how the government performs on creating employment opportunities, narrowing the gap between rich and poor, controlling the prices, providing the utilities, providing security in the country. The answers are measured on a scale from 1 to 4, where 1 refers to very bad, and 4 to very good (we expect a negative relationship between these variables and informality).

4)   Satisfaction with the system: six questions, asking the respondent's degree of satisfaction with the education system of the country, with the health system of the country, with the way the government performs its duties in the national office, the way the local authorities are solving the regional affairs, the system of social security, and the state-provided support for the needy. The answers are measured on a scale from 1 to 4, where 4 refers to completely satisfied, and 1 to completely dissatisfied (we expect a negative relationship between these variables and informality).

5)   Satisfaction with the quality of services: seven questions, asking respondent's degree of satisfaction with the quality of services, such as the roads and highways, the schools, health care, air, water, housing, the physical setting of their area of living. The answers are measured on a scale from 1 to 4, where 4 refers to completely satisfied, and 1 to completely dissatisfied (we expect a negative relationship between these variables and informality).

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[3] The social contract may also be understood in a broad sense as ties that hold citizens together (Algan, Cahuc and Zylberberg, 2012[42]). From this perspective, horizontal (generalised) trust can complement the analysis of vertical trust (trust and confidence in institutions). We replicated all of the analysis of this paper also for questions relating to the generalised trust (i.e.: "Do you believe that most people can be trusted"?), as well as for individual trust in relatives, friends, and neighbours. Our results show that informality is not correlated with any of these measures in a significant way, once other controls are included. In other words, informality status only affects trust towards the system (which, in some sense, is intuitive). For this reason, and to stay focused on the institutional aspect of the social contract, we do not report the analysis for horizontal trust in this paper; but it is available on request.

5 Descriptive statistics

Figures 1-5 show the distribution of answers to each attitudinal question, across formal and informal workers.

Figure 1 shows the distribution of the degree of confidence that formal and informal workers have in nine types of institutions. There is a greater share of respondents among informal workers, as compared to formal workers, who do not have any confidence in any type of institutions. The dissatisfaction gap among formal and informal workers is the highest in what concerns confidence in police (16 percentage points difference, if "not at all" and "not very much" questions are combined) and confidence in justice (13 percentage points). It is noteworthy, however, that the share of individuals who do not have confidence either in the parliament or in the political parties is particularly high among all respondents (over 85% of respondents, if "not at all" and "not very much" questions are combined)[4].

Figure 1. Distribution of confidence in various institutions, across formal and informal workers
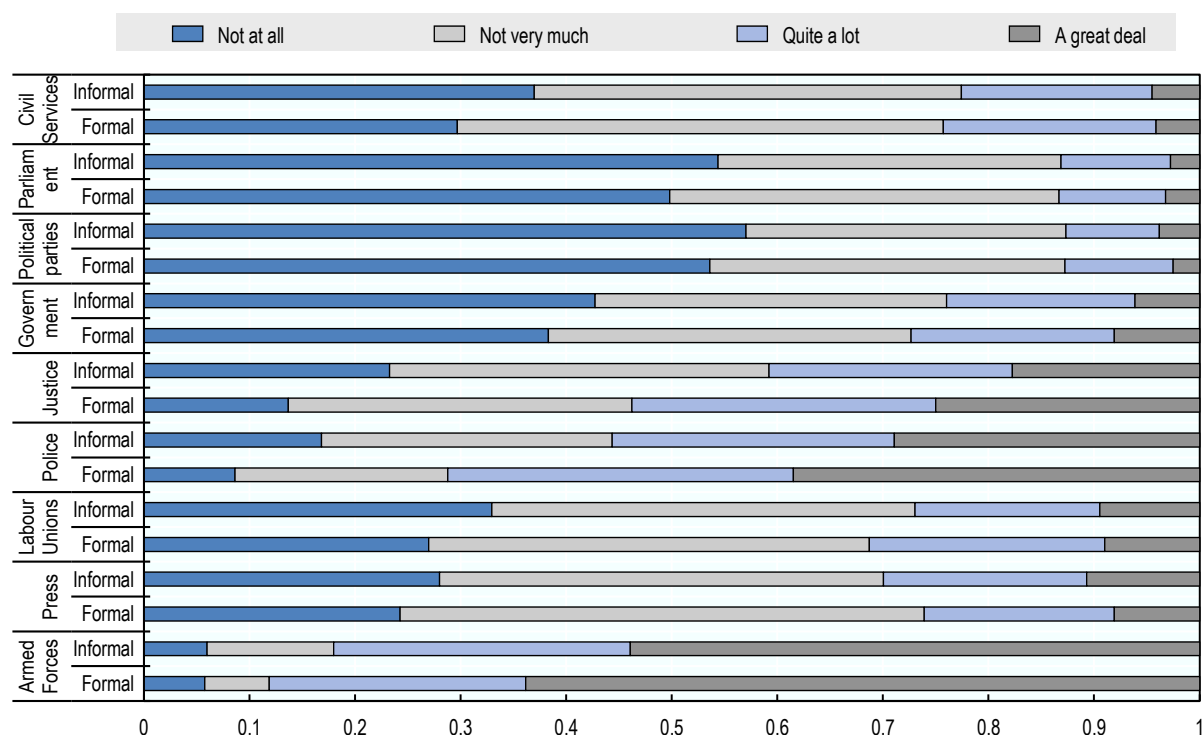
Source: Own calculations based on the WVS MENA Module, 2020.

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[4] Such a low level of confidence in the parliament or the political parties is not uncommon. It is also observed in other countries, notably those with high levels of informality, such as Bolivia, Colombia, Guatemala or Peru (over 90% of respondents in these countries do not have confidence either in the parliament or in the political parties: OECD, 2018[4]).

Figure 2 shows the distribution of responses to the set of attitudinal questions measuring (non-) justifiable behaviour. Answers to these questions are measured on a 1 to 10 scale. Remarkably, both among formal and informal workers, the shares of respondents who believe that such behaviour is never justifiable (answer recorded as one) are generally very large, and constitute over 50% of all respondents. In addition, only very few respondents (less than 2%) believe that such behaviour is always justifiable (the sum of answers coded as eight, nine or ten). Given this, for ease of interpretation, in Figure 2, answers to the four questions are aggregated as follows: never justifiable (scores equal to one); somewhat justifiable (scores between two and seven); and justifiable (scores from eight to ten). There is a somewhat greater share of respondents among formal workers, as compared to informal workers, who state that it is never justifiable to claim government benefits without being entitled to them, to avoid a fare on public transportation, to cheat on taxes if there is a chance, or to accept a bribe in the course of duties. However, the differences are not very large. Moreover, in light of the very low share of individuals who consider such behaviour as justifiable, whether formal or informal, it does not seem that informality is related to low morals.

Figure 2. Distribution of justifiable behaviour, across formal and informal workers
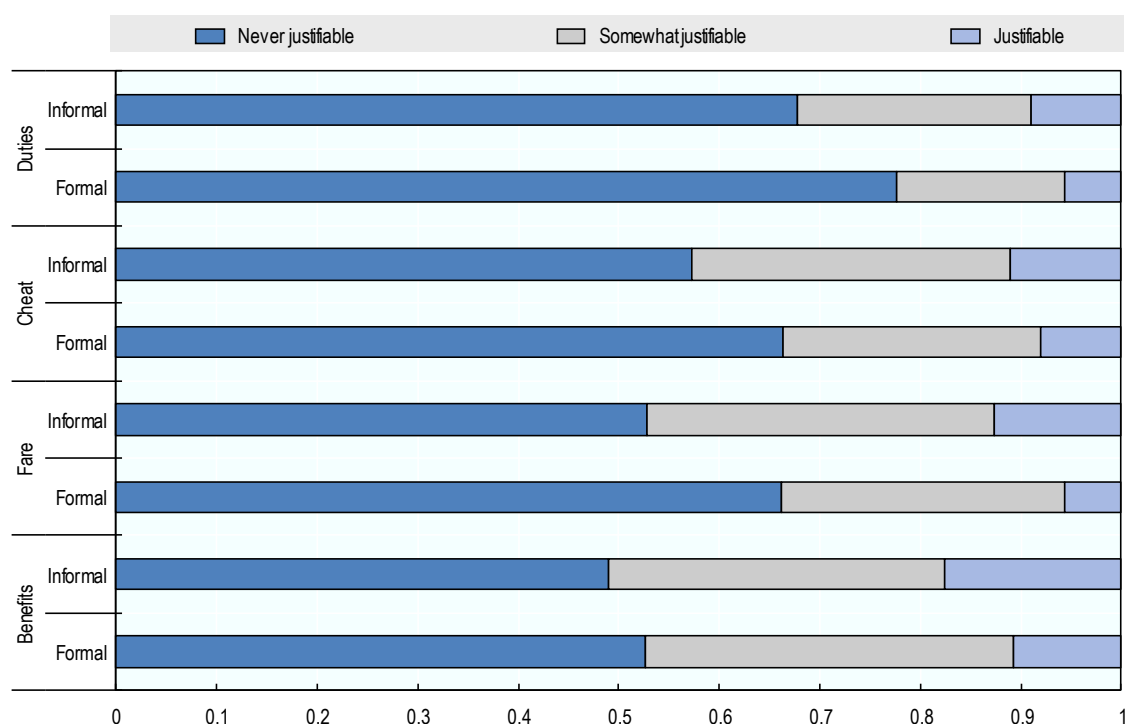
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 3 shows the distribution of answers regarding the perception of government performance in various areas, among formal and informal workers. There is a higher share of informal workers, as compared to formal workers, who have a particularly low opinion about government performance (very bad) in all areas. The dissatisfaction gap between formal and informal workers is the greatest in what concerns the assessment of the provision of public utilities (nine percentage points).

Figure 3. Distribution of the perception of government performance, across formal and informal workers
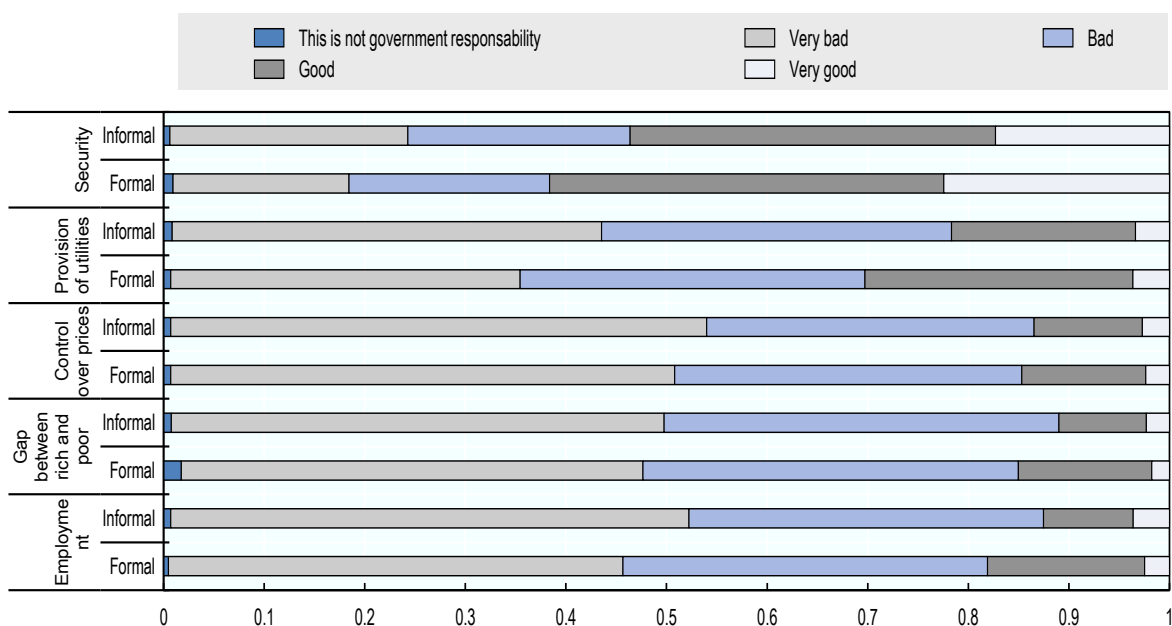
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 4 further shows that there is a higher share of dissatisfied (completely dissatisfied, and somewhat dissatisfied) informal workers, as compared to formal workers, with the functioning of the public system and publically provided-services. Very few individuals – whether formal or informal – are completely satisfied. Still, the share of such individuals is higher among formal workers. The satisfaction gap between formal and informal workers is particularly high for what concerns the functioning of healthcare and of the education system.

Figure 4. Distribution of satisfaction with the system, across formal and informal workers
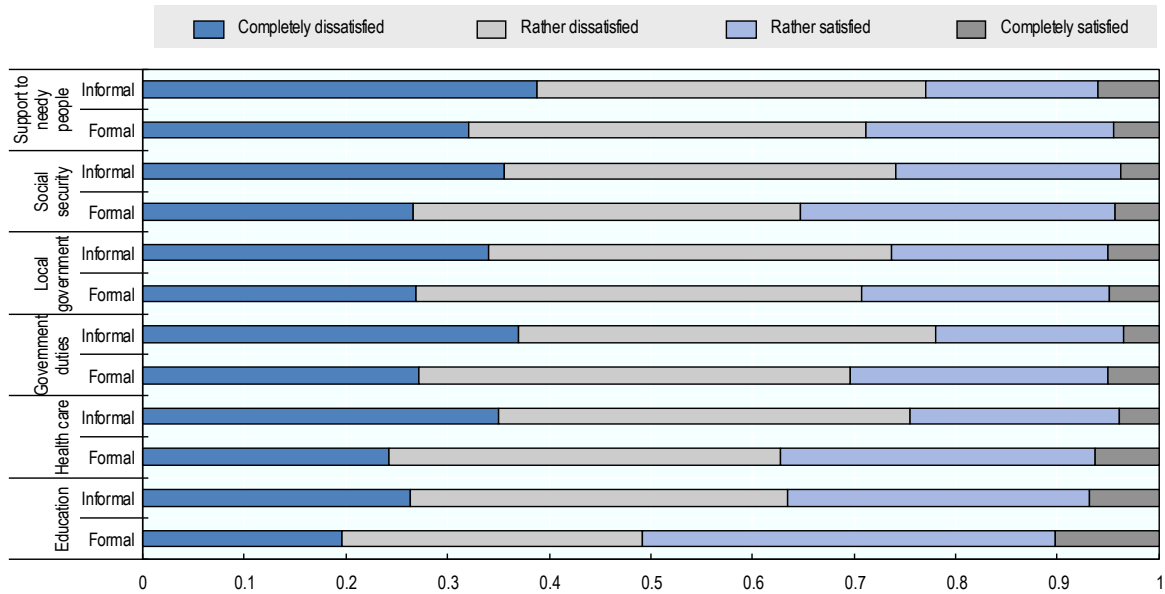
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 5. Distribution of satisfaction with the quality of services, across formal and informal workers
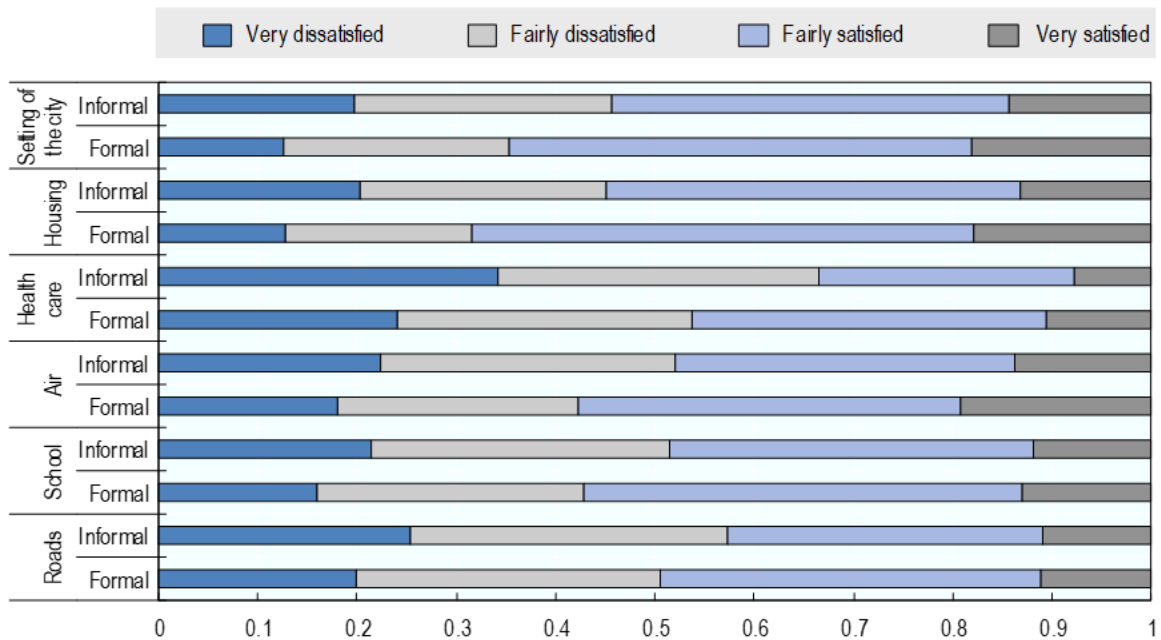
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 5 similarly reports a higher rate of dissatisfaction with the quality of the provided services among informal workers. The satisfaction gap is particularly pronounced with respect to the quality of health care: 67% of informal workers feel very or fairly dissatisfied, against 53% or formal workers. There is a

10 percentage point satisfaction gap (comparing very and fairly dissatisfied, to rather and completely satisfied), between formal and informal workers, concerning satisfaction with the quality of schools, air, and city setting, and a 13 percentage point gap in satisfaction with the quality of housing.

Figures 6-10 further show the averages of responses, within each of the five sets of attitudinal variables (confidence, justifiable behaviour, assessment of government performance, satisfaction with the system, satisfaction with the quality of provided services), by formal and informal workers, and by country. They show that the relationships between the informality status and the attitudinal variables generally hold within each country, and within each set of variables: informal workers, on average, have a lower level of confidence in institutions, lower assessment of the government performance, lower satisfaction with the system and the quality of provided services as compared to formal workers. Regarding justifiable behaviour, the differences between formal and informal workers are null. Iraq stands out: a higher share of informal workers considers that some of the behaviours are justifiable, such as claiming government benefits without being entitled to them, avoiding a fare on public transportation, cheating on taxes if there is a chance, or accepting a bribe in the course of duties (Figure 8). At the same time, in this country, there is no difference in (dis)-satisfaction with the system between formal and informal workers (Figure 10).

Figure 6. Average level of confidence in institutions, by informality and by country
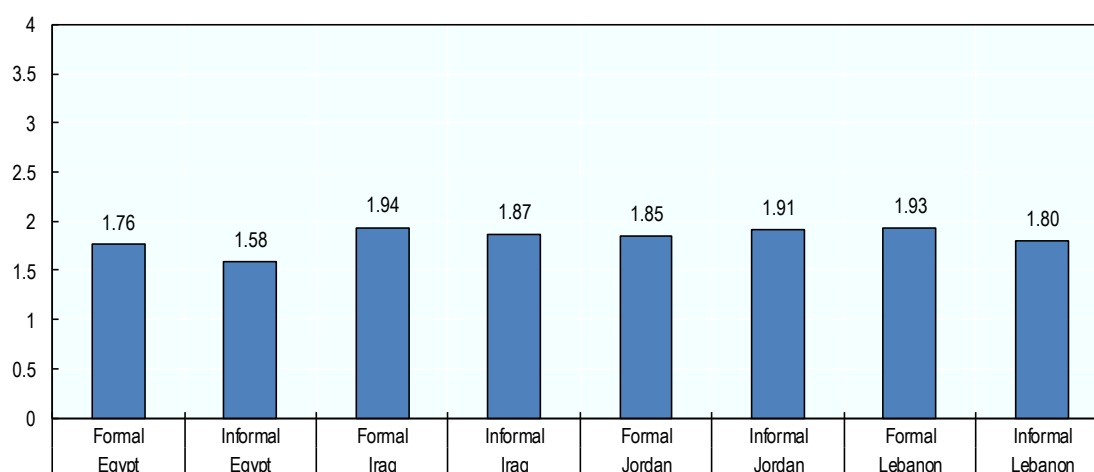
Note: Levels of confidence are constructed in two steps. First, responses to nine questions measuring confidence in different institutions are averaged on an individual level. Second, the obtained values are averaged by informality status on a country level.
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 7. Average level of justifiable behaviour, by informality and by country
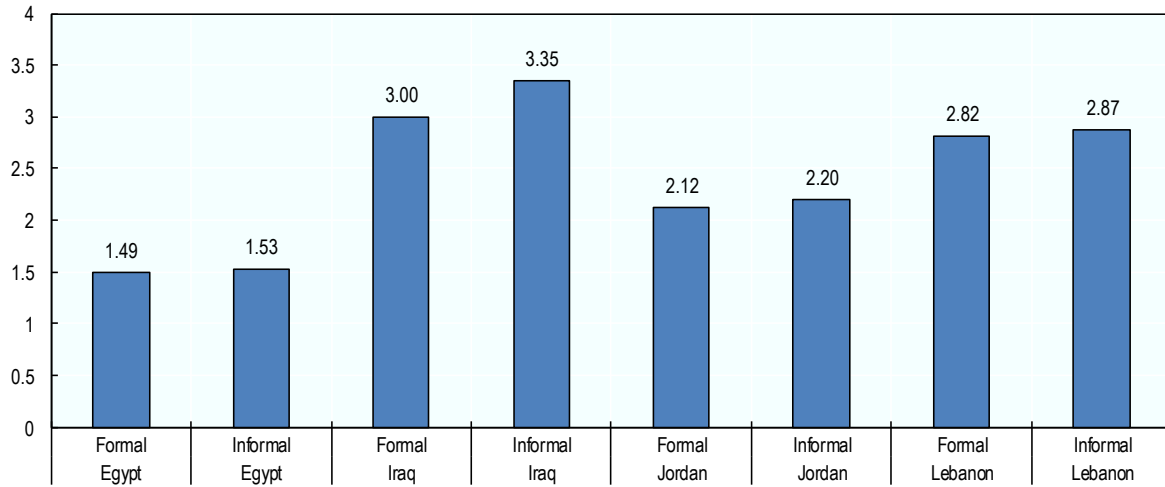
Note: Levels of justifiable behaviour are constructed in two steps. First, responses to four questions measuring whether the behaviour is justifiable, are averaged on an individual level. Second, the values obtained are averaged by informality status on a country level.
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 8. Average level of perception of government performance, by informality and by country
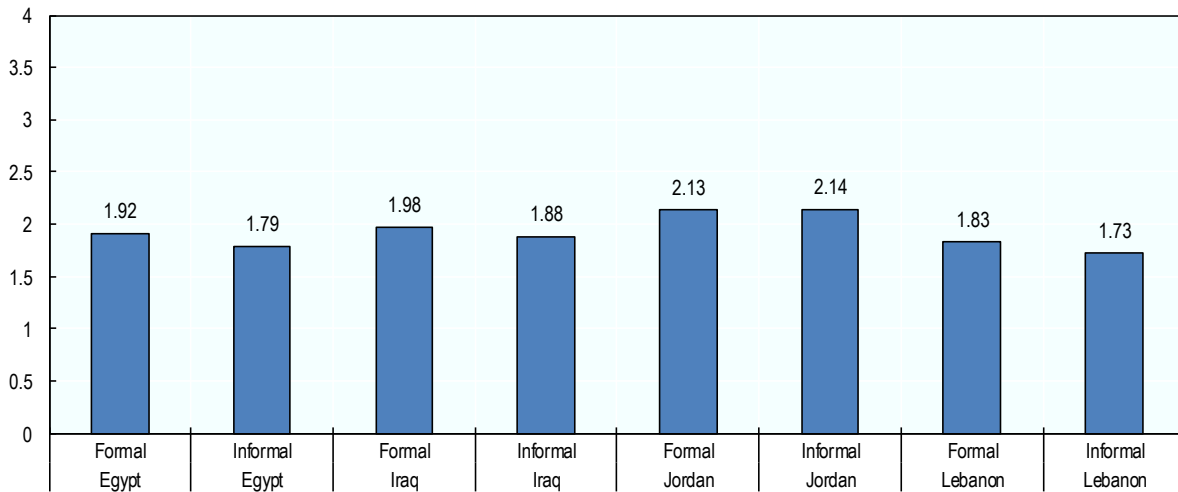
Note: Levels of government performance are constructed in two steps. First, responses to five questions measuring government performance in different areas are averaged on an individual level. Second, the values obtained are averaged by informality status on a country level.
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 9. Average level of satisfaction with the system, by informality and by country
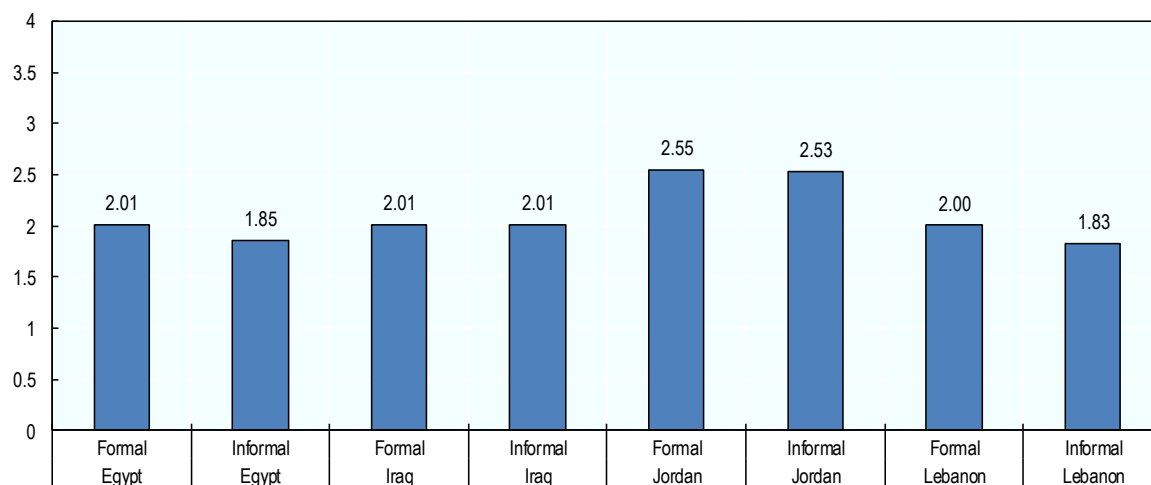
Note: Levels of satisfaction with the system are constructed in two steps. First, responses to six questions measuring satisfaction in different areas are averaged on an individual level. Second, the values obtained are averaged by informality status on a country level.
Source: Own calculations based on the WVS MENA Module, 2020.

Figure 10. Average level of satisfaction with the quality of provided services, by informality and by country
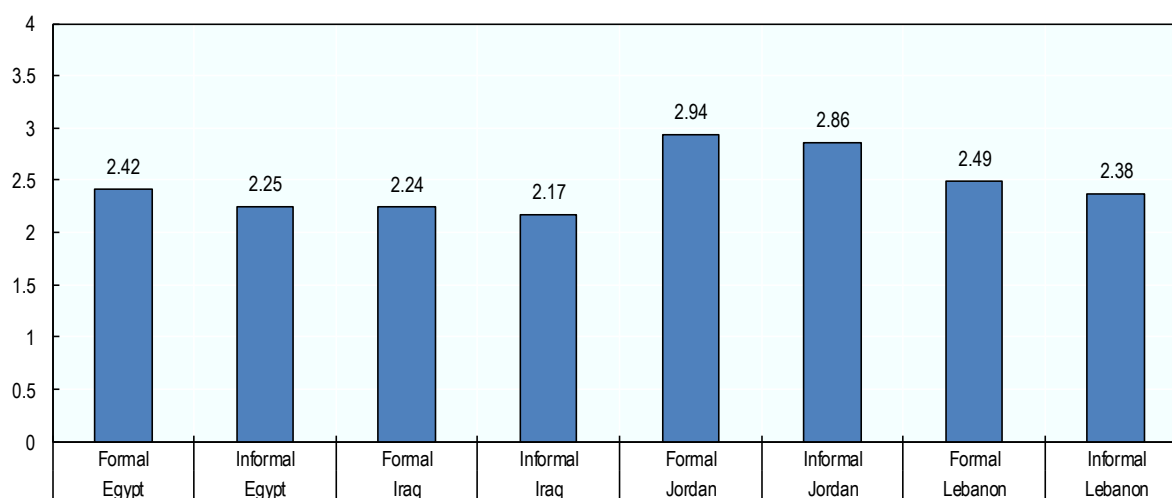
Note: Levels of satisfaction with the quality of provided services are constructed in two steps. First, responses to six questions measuring satisfaction in different areas are averaged on an individual level. Second, the values obtained are averaged by informality status on a country level.
Source: Own calculations based on the WVS MENA Module, 2020.

6 Empirical strategy and results

Informality status affects institutional attitudes and perceptions

This paper aims at testing a somewhat different hypothesis as compared to previous literature. It asks whether informal workers have systematically lower opinions regarding various aspects of the social contract. In other words, does informality status predict perceptions of and attitudes towards institutions, in addition to the reverse effect that has been established by earlier literature?

The starting point is estimation of the equation in which informality is an independent variable. This relationship cannot be interpreted as causal. Nevertheless, the value of this estimation is in isolating the relationship between informality and attitudinal variables from other confounding factors. The main specification is the following:

$$\text{Behav}_{ij} = \alpha_{ij} + \beta_{1i}X_i + \beta_{2i}\text{Informal}_i + C_j + \varepsilon_{ij} \tag{1}$$

where Behav_{ij} is one of the variables measuring behavioural and attitudinal characteristics of individual i residing in country j; Informal_i is the individual informality status, X_i is the set of individual socio-economic characteristics that include age, sex, education, marital status, status in employment (employee or self-employed), household income, and the area of living (urban or rural); C_j is a set of country fixed effects; and ε_{ij} is the error term.

There is a sizeable correlation between the dependent variables of each specific set of attitudinal questions. In order to reduce the number of these highly correlated variables, and also as a robustness check, a principal component analysis is undertaken. Within each set, one (first) principal component is obtained, and then the first principal component of each set is also used as an alternative dependent variable, Behav_{ij}. These artificially constructed variables are a linear combination of optimally-weighted questions within each set, with the benefit of allowing to explore the correlations between all variables within each set.

Given the nature of the dependent variables, the chosen estimation method is ordinary least squares (OLS). To increase the number of observations, the data for four countries are pooled in all estimations.

Tables 1-5 contain the estimation results. Each table corresponds to a separate set of variables of interest: confidence, justifiable behaviour, opinion regarding government performance, satisfaction with the system, satisfaction with the quality of services, which serve as dependent variables. Estimations for the principal components of each set as dependent variables are reported in the last column of each table.

Table 1. Informal employment and confidence in public institutions

Independent Variables:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Dependent variable: Confidence in					
	Armed forces	In press	Labour unions	Police	Justice	Govern ment	Polit. parties	Parliame nt	Civil services	PCA
Informal	-0.121***	-0.011	-0.157***	-0.222***	-0.159***	-0.036	-0.065*	-0.100***	-0.154***	-0.265***
	(0.046)	(0.041)	(0.045)	(0.052)	(0.053)	(0.051)	(0.036)	(0.037)	(0.039)	(0.079)
Age	0.004**	0.006***	-0.000	0.001	-0.005**	-0.004*	-0.002	-0.003*	-0.003*	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)
Sex	0.018	0.011	-0.067	-0.051	-0.056	-0.027	0.021	-0.026	0.042	-0.044
	(0.045)	(0.044)	(0.047)	(0.054)	(0.053)	(0.052)	(0.038)	(0.037)	(0.041)	(0.082)
Education	-0.020*	-0.009	-0.014	-0.019	-0.014	-0.022*	-0.015	-0.009	-0.005	-0.036*
	(0.012)	(0.011)	(0.011)	(0.014)	(0.013)	(0.013)	(0.009)	(0.009)	(0.010)	(0.021)
Status in employment	0.107*	-0.016	-0.010	0.031	-0.034	-0.059	0.003	-0.061	-0.004	-0.059
	(0.055)	(0.048)	(0.052)	(0.060)	(0.060)	(0.056)	(0.042)	(0.039)	(0.046)	(0.094)
Urban	-0.044	0.001	-0.030	-0.080	-0.165**	-0.078	-0.062	-0.049	-0.075*	-0.106
	(0.057)	(0.045)	(0.053)	(0.063)	(0.065)	(0.062)	(0.041)	(0.042)	(0.045)	(0.094)
Income	0.003	0.022*	0.023*	0.020	0.027*	0.011	0.017	0.015	0.015	0.047**
	(0.012)	(0.012)	(0.012)	(0.014)	(0.014)	(0.014)	(0.011)	(0.010)	(0.011)	(0.023)
Married	-0.070	-0.022	-0.101	-0.137	-0.229	-0.023	0.007	-0.164	-0.199*	-0.286
	(0.169)	(0.114)	(0.135)	(0.170)	(0.158)	(0.160)	(0.117)	(0.104)	(0.109)	(0.253)
Divorced	0.075	0.060	0.087	-0.018	-0.034	-0.087	-0.002	-0.037	-0.072	0.053
	(0.054)	(0.051)	(0.055)	(0.064)	(0.061)	(0.056)	(0.041)	(0.041)	(0.047)	(0.095)
N. Obs.	1,619	2,097	1,915	1,601	1,595	1,539	1,994	2,071	2,083	1,809
R-squared	0.137	0.074	0.068	0.175	0.150	0.038	0.063	0.066	0.061	0.045

Note: Columns headings indicate the dependent variable. Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

Table 2. Informal employment and justifiable behaviour

Independent Variables:	(1)	(2)	(3)	(4)	(5)
	Dependent variable: Justifiable to…				
	Claim non-entitled benefits	Travel without paying fare	Cheat on taxes	Accept a bribe	PCA
Informal	0.013	0.137	0.046	0.086	0.043
	(0.039)	(0.205)	(0.096)	(0.072)	(0.054)
Age	-0.015	-0.004	-0.016**	-0.007	-0.010
	(0.008)	(0.002)	(0.004)	(0.005)	(0.004)
Sex	-0.015	-0.245*	0.060	0.080	0.039
	(0.047)	(0.034)	(0.183)	(0.283)	(0.141)
Education	-0.146	-0.161	-0.091*	-0.101	-0.089
	(0.076)	(0.096)	(0.037)	(0.084)	(0.051)
Status in employment	-0.115	0.192*	-0.149	0.031	-0.055
	(0.240)	(0.029)	(0.160)	(0.133)	(0.131)
Urban	-0.248	0.297*	-0.009	0.136	-0.009
	(0.233)	(0.037)	(0.183)	(0.169)	(0.143)

Income	0.125	-0.056**	0.046	0.060	0.057
	(0.110)	(0.003)	(0.050)	(0.039)	(0.048)
Married	-0.538	0.073	0.065	-0.209	-0.152
	(0.412)	(0.412)	(0.359)	(0.263)	(0.235)
Divorced	0.141	0.574	0.050	0.107	0.079
	(0.158)	(0.138)	(0.189)	(0.148)	(0.122)
N. Obs.	2,133	1,032	2,154	2,155	2,132
R-squared	0.107	0.174	0.080	0.159	0.163

Note: Columns headings indicate the dependent variable. Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

Table 3. Informal employment and opinion regarding government performance

Independent variables:	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Government performance in…					
	Creating employment opportunities	Narrowing the gap between rich and poor	Controlling the prices	Providing the utilities	Providing security in the country	PCA
Informal	-0.099***	-0.052**	-0.054	-0.097	-0.060***	-0.174*
	(0.013)	(0.013)	(0.036)	(0.055)	(0.009)	(0.059)
Age	0.001	-0.001	0.001	0.001	0.007	0.003
	(0.001)	(0.001)	(0.002)	(0.001)	(0.005)	(0.003)
Sex	-0.020	-0.048	-0.013	-0.043	0.014	-0.063
	(0.036)	(0.061)	(0.034)	(0.072)	(0.034)	(0.132)
Education	-0.018	-0.012	-0.013	-0.005	0.012	-0.024
	(0.023)	(0.020)	(0.009)	(0.023)	(0.010)	(0.048)
Status in employment	-0.020	-0.048	-0.059***	-0.109**	-0.136*	-0.188***
	(0.052)	(0.023)	(0.010)	(0.027)	(0.055)	(0.020)
Urban	0.004	0.007	-0.049	-0.043**	-0.064	-0.042
	(0.043)	(0.023)	(0.032)	(0.011)	(0.052)	(0.066)
Income	0.034**	0.029**	0.033***	0.033***	0.035***	0.079***
	(0.008)	(0.007)	(0.005)	(0.004)	(0.004)	(0.008)
Married	0.058	-0.015	0.086	0.000	0.007	0.101
	(0.146)	(0.078)	(0.123)	(0.176)	(0.127)	(0.320)
Divorced	0.025	-0.045	0.014	0.013	0.058	0.014
	(0.072)	(0.059)	(0.078)	(0.056)	(0.075)	(0.179)
N. Obs.	2,091	2,073	2,099	2,102	2,105	2,023
R-squared	0.015	0.012	0.057	0.054	0.128	0.032

Note: Columns headings indicate the dependent variable. Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

Table 4. Informal employment and satisfaction with the system

Independent Variables:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable: Satisfaction with…						
	The education system of the country	The healthcare system of the country	How government performs duties	How local authorities are solving the regional affairs	The system of social security	The state-provided support for the needy	PCA
Informal	-0.138***	-0.136****	-0.137**	-0.010	-0.105	-0.083*	-0.282**
	(0.029)	(0.015)	(0.027)	(0.029)	(0.048)	(0.029)	(0.062)
Age	-0.000	-0.001	-0.003	0.000	-0.001	-0.004	-0.005
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.007)
Sex	-0.064*	-0.042	0.008	0.027	0.008	0.018	-0.038
	(0.023)	(0.018)	(0.042)	(0.053)	(0.045)	(0.038)	(0.092)
Education	-0.008	-0.020	-0.028	-0.009	-0.019	-0.028	-0.060
	(0.043)	(0.032)	(0.022)	(0.028)	(0.029)	(0.036)	(0.092)
Status in employment	-0.090	-0.108	-0.058	-0.113	-0.107	-0.003	-0.241
	(0.103)	(0.080)	(0.075)	(0.063)	(0.079)	(0.096)	(0.222)
Urban	-0.077**	-0.013	-0.015	-0.042	-0.025	0.007	-0.053
	(0.018)	(0.013)	(0.065)	(0.051)	(0.063)	(0.053)	(0.073)
Income	0.051	0.027*	0.046*	0.046*	0.038**	0.035**	0.118***
	(0.037)	(0.009)	(0.015)	(0.018)	(0.010)	(0.008)	(0.013)
Married	-0.145*	-0.178*	-0.105	-0.068	0.043	-0.071	-0.187
	(0.055)	(0.070)	(0.071)	(0.072)	(0.042)	(0.056)	(0.145)
Divorced	0.026	-0.009	-0.021	0.074	-0.000	-0.021	-0.008
	(0.082)	(0.032)	(0.033)	(0.055)	(0.008)	(0.031)	(0.111)
N. Obs.	2,122	2,120	2,091	2,090	2,081	2,114	2,000
R-squared	0.126	0.163	0.108	0.077	0.098	0.079	0.149

Note: Columns headings indicate the dependent variable. Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

Table 5. Informal employment and satisfaction with the quality of services

Independent variables:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable: Satisfaction with the quality of…						
	Roads	Schools	Air	Healthcare	Housing	The city setting	PCA
Informal	-0.071	-0.048**	-0.086	-0.134**	-0.118	-0.086	-0.227**
	(0.052)	(0.015)	(0.044)	(0.047)	(0.041)	(0.044)	(0.046)
Age	0.002	0.002	0.001	-0.000	-0.000	0.003	0.004
	(0.001)	(0.004)	(0.002)	(0.002)	(0.004)	(0.004)	(0.007)
Sex	-0.010	-0.003	-0.022	-0.059	-0.028	-0.008	-0.066
	(0.078)	(0.050)	(0.052)	(0.040)	(0.072)	(0.063)	(0.141)
Education	-0.017	0.008	-0.029	-0.015	0.010	0.004	-0.015
	(0.027)	(0.040)	(0.036)	(0.020)	(0.026)	(0.036)	(0.077)
Status in employment	-0.034	-0.050	-0.001	-0.045	0.028	-0.009	-0.045
	(0.015)	(0.064)	(0.040)	(0.046)	(0.046)	(0.058)	(0.106)
Urban	0.027	-0.022	-0.105	0.001	-0.009	-0.058	-0.065
	(0.078)	(0.064)	(0.050)	(0.039)	(0.075)	(0.059)	(0.116)

Income	0.070***	0.056	0.048**	0.034*	0.073***	0.059***	0.144***
	(0.006)	(0.029)	(0.009)	(0.013)	(0.010)	(0.009)	(0.013)
Married	-0.038	-0.232	-0.257	-0.153	-0.212	0.009	-0.387
	(0.099)	(0.110)	(0.112)	(0.157)	(0.108)	(0.184)	(0.252)
DIvorced	0.056	0.038	0.035	-0.029	-0.008	0.061	0.058
	(0.074)	(0.117)	(0.066)	(0.069)	(0.069)	(0.075)	(0.189)
Observations	2,153	2,147	2,153	2,152	2,155	2,154	2,142
R-squared	0.032	0.084	0.122	0.126	0.115	0.126	0.136

Note: Columns headings indicate the dependent variable. Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

From Tables 1-5, informality is associated in a negative and significant way with almost every aspect of the social contract. The partial correlation is negative and significant between informality and confidence in armed forces, labour unions, justice, political parties, parliament, and civil services; the individual assessment of government performance in creating employment opportunities, reducing the gap between rich and poor, providing security; the individual satisfaction with the education system of the country, the health system, how the government performs its duties, and its support for the needy; and the individual satisfaction with the quality of education and health systems.

In contrast, informality status seems to be unrelated to confidence in press and in the government generally; government performance in controlling prices and providing the utilities; satisfaction with the way local authorities are solving regional affairs; and satisfaction with the quality of roads, air, housing, or city setting. Likewise, none of the variables that measure (non-) justifiable behaviour seem to correlate with the informality status.

Informality is also significant in the regressions with the principal component variables as dependent variables, and with the expected signs, except for the justifiable behaviour regression, where it is insignificant.

Interestingly, not only is informality a robust significant predictor of different aspects of the social contract, it is – together with income – the only consistent predictor. Other controls in these regressions either do not have any effect (such as marital status), or their effect is disparate and of changing nature (such as age). Employment status has a systematic effect only in the regressions of government performance: self-employed are less satisfied with it as compared to employees. Education appears as a negative and significant predictor of confidence and satisfaction with the system in some regressions.

Institutional attitudes and perceptions also predict the probability of being in informal employment

In addition to the above regressions, and to verify the results established previously in the literature, we also estimate the reverse relationship, where informality status is the dependent variable:

$$\text{Informal}_{ij} = \alpha_{ij} + \beta_{1i}X_i + \beta_{2i}\text{Behav}_i + C_j + \varepsilon_{ij} \tag{2}$$

The results of estimations based on (2) are available in Table 6. They are based on a probit model, to account for the dichotomous nature of the dependent variable. Broadly, the same partial correlations between attitudes and the informality status remain statistically significant, once other individual characteristics are accounted for. Yet again, they cannot be interpreted as causal.

Table 6. Informal employment as a dependent variable

		Informal employment as a dependent variable	
Independent variables:		M.E.	S.E.
Confidence in:	Armed forces	-0.105***	(0.040)
	Press	-0.011	(0.052)
	Labour unions	-0.113*	(0.061)
	Police	-0.145***	(0.018)
	Justice	-0.102***	(0.036)
	Government	-0.022*	(0.013)
	Political parties	-0.077	(0.056)
	Parliament	-0.106*	(0.060)
	Civil services	-0.145***	(0.051)
	PCA	-0.067*	(0.040)
Justifiable to:	Claim non-entitled benefits	-0.003	(0.004)
	Travel without paying fare	0.021	(0.053)
	Cheat on taxes	0.003	(0.013)
	Accept bribe	0.016	(0.013)
	PCA	0.008	(0.019)
Government performance in:	Creating employment opportunities	-0.090***	(0.018)
	Narrowing the gap between rich and poor	-0.042***	(0.011)
	Controlling the prices	-0.055*	(0.032)
	Providing the utilities	-0.080**	(0.035)
	Providing security in the country	-0.031***	(0.011)
	PCA	-0.038***	(0.011)
Satisfaction with:	The education system	-0.120***	(0.028)
	The healthcare system	-0.135***	(0.016)
	How government performs duties	-0.133***	(0.034)
	How local authorities are solving the regional affairs	-0.012	(0.032)
	The system of social security	-0.097*	(0.051)
	The state-provided support for the needy	-0.069*	(0.039)
	PCA	-0.056***	(0.021)
Satisfaction with the quality of:	Roads	-0.063*	(0.038)
	Schools	-0.049	(0.041)
	Air	-0.067*	(0.035)
	Healthcare	-0.110***	(0.037)
	Housing	-0.109***	(0.017)
	The city setting	-0.074**	(0.036)
	PCA	-0.053***	(0.014)

Note: Each row shows results from a separate regression. Dependent variable is a dichotomous variable equal to one if employment is informal; zero otherwise. Estimation method: probit. Marginal effects (M.E.) are reported; robust standard errors (S.E.) are in parentheses. All regressions additionally include age, sex (male/female), marital status, area of living (urban/rural), income, country fixed effects, and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

Causality can plausibly run from informality to institutional attitudes and perceptions

From the discussion above, there is a possible simultaneity between informality status and individual perceptions of social contract. To account for it, one would need to employ an instrumental variables approach. It would consist in finding a suitable instrument – a variable which would be correlated with the independent variable, but not with the dependent one.

For example, in the regression assessing the linkage from informality to social contract, such instrument could be some exogenous measure of why an individual worker is informal. Unfortunately, instruments are usually very difficult to find. The WVS data that we are using, despite having a very rich set of questions measuring various kinds of attitudes, has a very limited questionnaire on other individual characteristics, or characteristics related to the place of work, which could potentially provide the necessary source of exogeneity. We have tried using the following variables as potential instruments: whether the worker is the chief earner of the family (the positive answer hinting to a potentially more constraint choice of work), and whether the spouse is employed (the positive answer hinting to a potentially less constrained choice of work and a better bargaining position in the labour market). These variables, however, did not pass the validity test: they actually have an insignificant correlation with the informality status (first-stage of the instrumental variables regression).

The only variable available with the data at hand that could potentially serve as an instrument, is a sector of work variable. Respondents are asked in which sector they work, with three possible answers: government or public institutions; private business or industry; private non-profit organisation. The sector of work is a very plausible cause of variation in the informality status: 75% of workers in private non-profit organisations report being informal; 69% of workers in private business or industry report being informal; and 34% among those respondents who indicate working for government or public institutions are informal[5]. The sector of work is also unlikely to independently contribute to the perception of the social contract beyond its effect through the quality of employment, which in our case is reflected by the informality status, and in the equations that already control for employment status and income. Moreover, while differences in the sector of employment are not the only, or even not necessarily the main cause of variation in the informality status, for our empirical approach to work, all that is needed is that it is a source of exogenous variation. The fact that the mainstream practice of recourse to informal employment in each sector may determine individual informality status provides such source of exogenous variation.

Indeed, in the reduced-form (first-stage) equation, where informal employment status is regressed on the full set of individual controls as in equation (1), and also on the dichotomous variables measuring the employment sector, the sector variables are statistically significant (Table A.3). In contrast, if included directly into the regression (1), the sector variables are insignificant, suggesting that these variables can serve as instruments and satisfy the exclusion restriction (Table A.4). At the same time, the inclusion of the sector variables in these regressions does not render the informality variable insignificant, suggesting that the effect of the sector variable indeed propagates through the informality variable and does not have an independent effect.

In Table 7, we present the results from the second stage estimation of equation (3), which is similar to the estimation of equation (1), with the main difference that informality status is instrumented with the sector of work variables.

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[5] While it may be surprising to find informality in the public sector, this situation is not uncommon in the MENA region.The public sector may recur to informal employment relationships, especially when it comes to peripheral jobs such as cleaning, security, gardening (see, for evidence, (ONMT, 2020[34])).

$$Behav_{ij} = \alpha_{ij} + \beta_{1i}X_i + \beta_{2i}Informal_i + C_j + \varepsilon_{ij} \qquad (3)$$

$$Informal_{ij} = \gamma_{ij} + \varphi_{1i} X_i + \varphi_{2i}Sector_{1i} + \varphi_{3i}Sector_{2i} + C_j + \varepsilon_{ij}$$

where $Sector_{1i}$ is a dichotomous variable equal to 1 if individual i works in private business or industry; $Sector_{2i}$ is a dichotomous variable equal to 1 if individual i works in private non-profit organisation. Work for government or public institutions serves as a benchmark.

The results show that the informality variable remains significant in some (though not all) regressions, even when it is instrumented. In other words, not only is informality robust to instrumenting, but the causality can also run from informality to the perceptions of the social contract, at least for some aspects of the social contract. These aspects are: confidence in labour unions, confidence in parliament, confidence in civil services, satisfaction with the healthcare system, satisfaction with the way the government performs its duties, satisfaction with the quality of healthcare, satisfaction with the city setting. In these regressions, the F-statistic of excluded instruments is 48.95 – above the conventional levels, and is statistically significant at 1% (invariant for all estimations).

The data at hand does not allow constructing instruments which would allow examining causality from social contract to the informality status.

Table 7. Informal employment instrumented by the sector variables; second-stage regressions

		Informal employment as an explanatory variable	
Dependent variables:		Coefficient	S.E.
Confidence in:	Armed forces	1.833	(1.280)
	Press	0.103	(0.176)
	Labour unions	-0.398*	(0.211)
	Police	-0.087	(0.302)
	Justice	-0.269	(0.313)
	Government	-0.338	(0.331)
	Political parties	0.102	(0.149)
	Parliament	-0.414***	(0.150)
	Civil services	-0.507***	(0.159)
	PCA	-0.578	(0.362)
Justifiable to:	Claim non-entitled benefits	-0.294	(0.506)
	Travel without paying fare	0.066	(0.505)
	Cheat on taxes	-0.183	(0.415)
	Accept bribe	0.121	(0.348)
	PCA	-0.084	(0.266)
Government performance in:	Creating employment opportunities	-0.283	(0.175)
	Narrowing the gap between rich and poor	-0.002	(0.165)
	Controlling the prices	0.026	(0.160)
	Providing the utilities	-0.199	(0.177)
	Providing security in the country	-0.168	(0.197)
	PCA	-0.257	(0.390)
Satisfaction with:	The education system	-0.196	(0.170)
	The healthcare system	-0.481***	(0.161)
	How government performs duties	-0.396**	(0.165)
	How local authorities are solving the regional affairs	-0.288	(0.179)
	The system of social security	-0.118	(0.173)
	The state-provided support for the needy	-0.076	(0.179)
	PCA	-0.713*	(0.376)

Satisfaction with the quality of:	Roads	-0.030	(0.181)
	Schools	-0.131	(0.174)
	Air	-0.037	(0.181)
	Healthcare	-0.490***	(0.175)
	Housing	-0.154	(0.171)
	The city setting	-0.361**	(0.171)
	PCA	-0.502	(0.329)

Note: Each row is a separate regression. Dependent variable is defined in columns 1 and 2. Independent variable: informal employment. Estimation method: instrumental variables. Coefficients of the second-stage regression are reported; robust standard errors (S.E.) are in parentheses. All regressions additionally include age, sex (male/female), marital status, area of living (urban/rural), income, country fixed effects, and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

7 Conclusions

This paper examined the nexus between informality and the perception of the social contract from an individual perspective. Controlling for a range of factors, we established that there is a significant partial correlation between informality and 16 out of 30 measurable aspects of the social contract. Moreover, together with income, informal employment status is the only robust and consistent predictor of these various aspects of the social contract, as compared to other individual characteristics, including sex, age, education, marital status, area of living, employment status, or sector of work.

Even if the exact direction of causality between informality and the social contract is hard to establish, the paper shows that, at least for some aspects of the social contract, the causality quite plausibly runs from informal employment status to a weak social contract. In other words, individuals in informal employment are more likely to be less satisfied with the system and its quality, as compared to formal workers, and thus have the strongest perception that the social contract is broken. Accounting for a possible reverse causality, the paper shows that informal workers have less confidence in labour unions, in parliament, in civil services, lower satisfaction with the quality of healthcare and the healthcare system, with the way the government performs its duties, and with the city setting, as compared to formal workers. With the data at hand, we could not test for the causality running from the social contract to the informality status (i.e. the "exit" hypothesis suggested by the literature). Yet such direction of causality, possibly for other aspects of the social contract, cannot be ruled out, and was indeed established in other, macroeconomic, studies. It is important to note, however, that this paper did not intend to seek the exact direction of causality. It intended only to show that the relationship between individual informality status and a perceived weak social contract exists, that it is robust to different measures and estimation techniques, and that the relationship can go both ways. This objective was achieved.

The findings of this paper suggest that, in the countries of our sample, publically provided services including healthcare, and public institutions, are not responding to the demands and aspirations of citizens in general, and of informal workers in particular. Informal workers disproportionately perceive more injustice, and are less satisfied with the system and its quality.

Reinforcing the social contract, especially in post-COVID times, means placing demands of all citizens, including informal workers, at the heart of the system. This requires laying emphasis on greater inclusiveness in the recovery of the health system, but also of labour markets, through more formal employment opportunities and access to social protection. Importantly, it requires strengthening institutions and publically provided services to ensure that they are accessible, fair, reliable, predictable and trustworthy. Reforms should focus first and foremost on improving the access to, and the quality of those services that are linked to the main sources of worry of citizens, such as healthcare. This requires increased and more efficient public spending on those services, and more co-ordinated and coherent action of public officials. Strengthening trustworthiness of parliaments and civil services, and improving how governments perform their duties, are equally important in the long-term. In all countries of our sample, one way to simultaneously increase formality and reinforce the social contract would be to expand social protection coverage, and make existing social protection plans more inclusive and effective.

Since the data were collected, the situation in some countries of our sample has changed, often for the worse. For example, in Lebanon, combined shocks, including the explosion of the Beirut port, led to an unprecedented socioeconomic crisis affecting all segments of society. Income poverty rose from 25% of

the population in 2019 to 74% in 2021; the share of households deprived of healthcare increased from 9% in 2019 to 33% in 2021, and informal employment became of an ever-growing concern (UN - ESCWA, 2021[41]). While difficult to attain, the restauration of the social contract, and ensuring that it is inclusive of the hardest hit, are among the key priorities for this country.

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Annex A.

Table A.1. Sample description

Country	Survey year	Number of observations used in the regression analysis (non-missing data on socio-economic characteristics)
Egypt	2018	589
Iraq	2018	504
Jordan	2018	403
Lebanon	2018	735
Total		2231

Source: Own calculations based on the WVS MENA Module, 2020.

Table A.2. Definition of variables used in the regression analysis

Variable name	Description of variables used in the analysis
Dependent variable	
Informal employment	A dichotomous variable equal to 1 if a worker reports that he/she, or his/her employer is contributing to the social security on his/her behalf; 0 otherwise
Individual socio-economic characteristics	
Age	Age, ranges from 16 to 64
Sex	A dichotomous variable equal to 1 if male, 0 if female
Education	A discrete variable for education levels, ranges from 1 – Early childhood education (ISCED 0) to 7 – Bachelor or equivalent (ISCED 6)
Marital status: married	A dichotomous variable equal to 1 if married or in a civil partnership, 0 otherwise. Single/never married is the benchmark
Marital status: divorced	A dichotomous variable equal to 1 if divorced, separated, or widowed, 0 otherwise. Single/never married is the benchmark
Status in employment	A dichotomous variable equal to 1 if works as an employee, 2 if self-employed
Urban	A dichotomous variable equal to 1 if living in an urban area, 0 if living in a rural area
Income	A discrete variable, ranging from 1 (lowest) to 10 (highest), and indicating a self-reported income scale of the household.
Sector (1), sector (2)	Dichotomous variables equal to 1 if individual i works in private business or industry (1); or in a private non-profit organisation (2); zero otherwise. Benchmark: work for government or public institutions.
Variables of interest	
Confidence: First Principal Component	
Confidence in: armed forces Confidence in the press Confidence in labor union Confidence in the police Confidence in justice Confidence in the government Confidence in the parliament Confidence in civil services	4–scale answers to the question "I am going to name a number of organisations. For each one, could you tell me how much confidence you have in them: 1 – "None at tall", 2 – "Not very much", 3 – "Quite a lot", 4 –"A great deal""

Justifiable: Second Principal Component Justifiable to claim government benefits without being entitled to them Justifiable avoiding a fare on public transportation Justifiable cheating on taxes Justifiable accepting a bribe in the course of duties	10-scale answer to the question "How much do you agree or disagree with the statement that nowadays one often has trouble deciding which moral rules are the right ones to follow?" 1 "Completely agree" – 10 "Completely disagree"
Government performance : Third Principal Component Government performance in: creating employment opportunities; narrowing the gap between rich and poor; controlling the prices; providing utilities; providing security in the country	4-scale answers to the question "I am going to ask a number of questions related to the current government's performance. How would you evaluate the performance of the current government in...?" Mark "0" if the respondent says that "this is not government's responsibility". 1 – "Very bad" 2 – "Bad" 3 – "Good" 4 – "Very good"
Satisfaction: Fourth Principal Component Satisfaction with: the education system; health care; government duties; the way the local authorities are solving the regional affairs; the system of social security; the state-provided support for the needy	4-scale answers to the question "How satisfied are you with the following?" 1 "Completely dissatisfied" – 2 "Rather dissatisfied" 3 – "Rather satisfied" 4 – "Completely satisfied"
Quality: Fifth Principal Component Quality of roads Quality of school Quality of air Quality of health care Quality of housing Quality of the physical setting of their area of living	4-scale answers to the question "In the city or area where you live, are you satisfied or dissatisfied with the quality of the following? 1 – "Very dissatisfied" 2 – "Fairly dissatisfied" 3 – "Fairly satisfied" 4 – "Very satisfied"

Source: Own calculations based on the WVS MENA Module, 2020.

Table A.3. Sector of employment is a significant predictor of informal employment (First-stage regression)

Independent Variables:	
Sector 1 (private business or industry)	0.281*
	(0.093)
Sector 2 (private non-profit organisation)	0.359**
	(0.110)
Age	-0.001
	(0.002)
Sex	-0.005
	(0.019)

Education		-0.032***
		(0.003)
Status in employment		0.183*
		(0.077)
Urban		-0.016
		(0.016)
Income		-0.025*
		(0.010)
Marital status: married		0.042
		(0.042)
Marital status: divorced		0.071
		(0.037)
Observations		2,060
R-squared		0.202

Note: Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

Table A.4. Sector of employment does not predict perceptions of social contract

		Sector 1		Sector 2		Informality	
Dependent variables:							
Confidence in:	Armed forces	0.128	(0.086)	0.266	(0.127)	-0.164**	(0.037)
	Press	0.026	(0.104)	0.047	(0.247)	0.001	(0.065)
	Labour unions	-0.096	(0.098)	-0.012	(0.226)	-0.117	(0.080)
	Police	-0.001	(0.054)	0.098	(0.084)	-0.235**	(0.032)
	Justice	0.029	(0.023)	-0.126	(0.119)	-0.150*	(0.036)
	Government	-0.071	(0.102)	-0.06	(0.158)	-0.013	(0.023)
	Political parties	0.048	(0.063)	0.026	(0.148)	-0.054	(0.053)
	Parliament	-0.103	(0.070)	-0.094	(0.139)	-0.072	(0.056)
	Civil services	-0.115	(0.096)	-0.122	(0.169)	-0.123*	(0.040)
	PCA	-0.115	(0.227)	-0.05	(0.499)	-0.204	(0.136)
Justifiable to:	Claim non-entitled benefits	-0.061	(0.137)	-0.243	(0.355)	0.011	(0.069)
	Travel without paying fare	-0.059	(0.081)	1.510*	(0.062)	0.24	(0.131)
	Cheat on taxes	-0.031	(0.144)	-0.282	(0.375)	0.077	(0.091)
	Accept bribe	-0.06	(0.088)	0.296	(0.352)	0.107	(0.073)
	PCA	-0.04	(0.080)	-0.048	(0.292)	0.059	(0.058)
Government performance in:	Creating employment opportunities	-0.086	(0.062)	0.066	(0.084)	-0.090**	(0.026)
	Narrowing the gap between rich and poor	-0.026	(0.066)	0.178	(0.137)	-0.064	(0.037)
	Controlling the prices	-0.014	(0.050)	0.181	(0.090)	-0.063	(0.047)
	Providing the utilities	-0.079	(0.088)	0.169	(0.110)	-0.098	(0.071)
	Providing security in the country	-0.074	(0.110)	0.15	(0.112)	-0.068	(0.031)
	PCA	-0.14	(0.182)	0.427	(0.278)	-0.188	(0.109)
Satisfaction with:	The education system	-0.156*	(0.019)	0.181	(0.116)	-0.135*	(0.044)
	The healthcare system	-0.064	(0.057)	0.107	(0.092)	-0.113***	(0.006)
	How government performs duties	-0.11	(0.070)	0.032	(0.077)	-0.114***	(0.019)
	How local authorities are solving the regional affairs	-0.127	(0.073)	0.121	(0.102)	-0.004	(0.010)
	The system of social security	-0.047	(0.095)	0.179	(0.182)	-0.114	(0.052)
	The state-provided support for the needy	-0.009	(0.073)	0.047	(0.116)	-0.082*	(0.027)
	PCA	-0.251	(0.172)	0.334	(0.300)	-0.267**	(0.062)
Satisfaction with the quality of:	Roads	-0.022	(0.068)	0.151	(0.102)	-0.061	(0.044)
	Schools	-0.068	(0.084)	0.145	(0.160)	-0.032	(0.057)

Air	-0.161*	(0.039)	0.207	(0.127)	-0.086	(0.050)
Healthcare	-0.028	(0.087)	0.116	(0.121)	-0.103*	(0.034)
Housing	-0.043	(0.039)	0.128	(0.084)	-0.113*	(0.042)
The city setting	-0.121	(0.006)	0.066	(0.094)	-0.064	(0.039)
PCA	-0.186	(0.118)	0.351	(0.251)	-0.191***	(0.011)

Note: Each row is a separate regression. Dependent variable is defined in columns 1 and 2. Estimation method: OLS. Regression coefficients are reported; robust standard errors are in parentheses. All regressions additionally include country fixed effects and a constant. *** - significant at 1%, ** - significant at 5%, * - significant at 10%.
Source: Own calculations based on the WVS MENA Module, 2020.

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