Socio-Demographics, Political Attitudes and The Informal Sector Employment: A Cross Country Analysis*

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Abstract

In this paper, we empirically investigate the relationship between the informal sector employment, and micro-level socio-demographic characteristics, political acts and attitudes, and individual norms. Using self-reported micro-level individual data from the World Values Survey for seven developing countries, China, Ecuador, Egypt, Mexico, Peru, South Africa and Yemen, we show that socio-demographic characteristics of individuals are strong predictors of their informal sector employment. We further document that individual preferences for an economically strong, interventionist and egalitarian state, and confidence in state and political institutions are positively and significantly correlated with the informal sector employment, whereas variables associated with confidence in free-market institutions and support for competition are negatively and significantly correlated with the informal sector employment. We also show that individuals who either actively or inactively participate in peaceful and lawful political processes are significantly less likely to work in the informal sector. Finally, we document that individual norms, such as religiosity and tax morale are negatively correlated with the informal sector employment. Throughout our analyses, instead of having to rely on ad-hoc informality categorizations of third parties, we base our measurement of the informal sector employment directly on the self-evaluation of individuals who have the best information on the degree of their informality.

Keywords: shadow economy, political participation, confidence in institutions, tax morale.

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1 Introduction

The informal economy corresponds to the set of economic activities that are not subject to government scrutiny. (Hart, 2008) Even when the informal sector produces the same legal products, contrary to the formal sector, the informal sector is imperfectly regulated by the state (Ihrig and Moe, 2004; Schneider and Enste, 2000, 2002; Elgin and Oztunali, 2012). The asymmetry in the degree of government interference leads to important implications both for employers and employees. For employers of the informal sector, limited government intervention leads to lower labor costs and less regulation; for employees, the informal sector employment comes with less job security, below-minimum-level wages, sub-standard working conditions and lack of social security. (Comola and de Mello, 2011; Khamis, 2013) Accordingly, it is natural to expect that individual characteristics of the informal sector employees, such as their demographic attributes, political attitudes and preferences, and perceptions and ethical priorities could differ from those of the formal sector employees.

While economic determinants and consequences of informal activities have long been studied extensively, there are not many studies that *directly* investigate the individual-level correlates of the informal sector employment, and few if any focusing on political attitudes and individual norms: earlier studies in the literature are either limited to macro-level cross-country analysis or they concentrate almost exclusively on using proxies, such as the role of tax morale in the informal sector employment, mainly because of data limitations.[1] The greatest challenge in understanding the connection between individual characteristics and sectoral choice at the macro level is that the informal economy, by definition, is hard to measure objectively. Different ways of measuring informality at the macro-level, such as the Multiple Indicators Multiple Causes (MIMIC) approach or model-based estimations, have not succeeded in overcoming the skepticism about the true size of informality, and accordingly micro-level determinants and implications of the informal sector employment have yet remained to be unveiled. (Elgin and Oztunali, 2012)[2]

Of the studies that concentrate on the relationship between tax morale and informal sector

[1] Schneider and Buehn (2012) defines tax morale as *"... the residuum of tax compliance which cannot be explained by standard portfolio choice determinants and deterrence measures"*. It is either used as a proxy for informal employment or as the single most important predictor of the individuals's tendency to work in the informal economy. Accordingly, the method to quantify tax morale in many of the previous studies is to scale individuals's opinion about if cheating on taxes is justifiable or not.

[2] For alternative ways of defining and measuring informality in other contexts, see Acar and Tansel (2016), among others.

employment, Torgler *et al* (2010) investigate the size of the shadow economy in the cantons of Switzerland. Employing individual-level tax morale data and macro-level measures of the informal economy, they argue that the size of the informal economy is negatively correlated with the extent of local autonomy. They further show that tax morale is positively correlated with trust in court system, religiosity and direct democratic participation, but they do not provide evidence on the direct micro-level relationship between the informal sector employment and the aforementioned variables. Similarly, Teobaldelli and Schneider (2012), using macro-level data from 57 countries, document that as the extent of direct democracy increases and preferences of citizens are better reflected in actual policy-making, individuals's incentives to operate in the informal sector decreases.

As for the studies that investigate the link between tax morale and socio-demographic characteristics, Lago-Penas and Lago-Penas (2010) show that tax morale in Europe is systematically affected by socio-demographic characteristics and political attitudes, as much as by regional GDP and tax arrangements. Dell'Anno (2009), relying on a panel data of 19 Latin American countries for the period 1990-2004, argues that tax morale is correlated with individuals's perceptions of the effectiveness of policy makers in exercising control over the relevant macroeconomic variables and safeguarding the interests of citizens. Torgler and Schneider (2007) analyze the factors that shape or maintain tax morale, and investigate the relevance of political views, culture, religion and different institutions in three European countries with multi-ethnic populations, namely Belgium, Spain and Switzerland. Alm and Torgler (2006) study cultural differences across countries in terms of tax morale and argues that there is a strong negative correlation between the size of shadow economy and the degree of tax morale in those countries. Hug and Spörri (2011) shows how institutions allowing citizens a direct say on policy decisions affect tax morale; specifically holding referendums strengthens the link between trust in government and tax morale in 27 European countries.

While these studies address different aspects of the linkages between the informal sector employment, tax morale and individual characteristics, they do not unveil the *direct* relationship between informality and micro-level individual characteristics. Instead, they use proxies, such as tax morale, or study informality using macro-level data, while mostly neglecting the role of demographics and other individual characteristics. Among few studies which directly focus on the micro-level correlates of the informal employment, Falco (2014), using micro-level survey data

from Ghana, shows that there is a negative relationship between risk aversion and the informal sector employment. Risk averse individuals are less likely to be informally employed than to queue for formal jobs. Nguimkeu (2015), using micro-level data from Cameroon, documents that the selection to the informal entrepreneurship instead of formal entrepreneurship is largely related to the access to credit, as well as education, parental occupation and initial wealth. Williams *et al* (2016), reporting a 2012 survey of 300 informal micro-enterprises in Pakistan, evaluate the socio-demographic determinants of high degrees of informality.

In this study, we use a self-reported micro-level data set so as to explore the direct link between individual characteristics and sectoral employment: individuals *themselves* identify in which sector they are employed, so we are able to rely on the classification done by the most-informed party instead of having to rely on the inferences made by third-parties with limited information.[3,4] While doing so, we employ micro-level data collected by the World Values Survey (WVS) in seven lower or upper middle-income developing countries including China, Mexico, Ecuador, Yemen, Peru, South Africa and Egypt, and we provide empirical evidence for ways in which being employed in the informal sector relates to the non-economic attitudes of individuals.

Our main findings are briefly as follows: first, we show that demographics is significantly relevant to the informal sector employment. Specifically, informality is less common among male, middle-aged and married individuals. Those who attended university, no matter if they received a degree or not, are less likely to be employed in the informal sector.[5] We also provide evidence that nature of job specifications is relevant to informality: those with full-time, white-collar, non-manual/intellectual jobs with higher income levels are less likely to work in the informal sector.

Second, we show that there is a significant and positive correlation between informality and preference for strong state involvement in the economy. Individuals who believe in interventionist statements such as "incomes should be made more equal", "government ownership of industry and business should be increased", "government should ensure that everyone is provided for"

[3]We acknowledge that misreporting might be a valid concern, however given that World Values Surveys are anonymously conducted by a third-party non-governmental organization, we believe there is no clear incentive for respondents to misreport on characteristics we concentrate in this paper.

[4]Social security coverage is another and a frequently-used micro-level method of measuring informality in the literature, and it does not depend on third parties for information, either. For a discussion of where social security coverage serves as a better measure of informality than other conventional methods, see Acar and Tansel (2016), and for a study utilizing social security coverage in a suitable context see Tansel (1999).

[5]Similar findings with respect to demographic factors have been documented in the literature. See McCaig and Pavenik (2015) and Williams *et al*(2016), among others.

and "competition is bad" are more likely to be employed in the informal sector. Since the the alternative is unlikely, it is plausible to argue that individuals employed in the informal sector seem to have more favorable attitudes for strong government regulation and interference, whether it be in the form of redistribution or direct government ownership.

Third, the informal sector employment is positively correlated with confidence in political institutions, whereas it is negatively correlated with confidence in market institutions. This finding suggests either that individuals who are employed in the informal sector are more likely to have higher confidence in the political institutions, specifically the government, and less likely to have confidence in market institutions such as major companies or trade unions; or that individuals having skeptical views about markets and positive views on governments have harder time finding or keeping at a job in formal sector, if these preferences and attitudes can be observed by the employer.

Fourth, in line with the findings by Torgler *et al* (2010) and Teobaldelli and Schneider (2012), we document that political participation is negatively correlated with informality. We show that individuals who are employed in the informal sector are less likely vote in local or national elections, actively or inactively involve in politics and defend their rights through peaceful legal ways, such as signing a petition or attending lawful/peaceful demonstrations, or that active politically participating workers are less likely to seek and accept informal sector employment compared to their politically inactive counterparts.[6]

Fifth, we provide evidence that religiosity and tax morale are significantly and negatively correlated with the informal sector employment, whereas patriotism does not have a significant correlation. Although Heinemann and Schneider (2011), using data from 162 countries, show that countries with more religious citizens do not necessarily have smaller shadow economies, we provide empirical evidence that at the micro-level religious individuals are less likely to be employed in the informal sector. Similarly, those who believe evading taxes is never justifiable are less likely to work in the informal sector, as well. This finding could also be a result of a two-way causality: either religious individuals or those with stronger tax morale choosing not to work in the informal sector, or employers choosing not to hire religious individuals and/or

[6]Hatipoglu and Ozbek (2011), relying on model simulations with data calibrations from Turkey, Mexico and the US, also reach a similar conclusion, as authors report that a distortion in the democratic rule is associated with an increase in the informal sector.

individuals with stronger tax morale.[7,8] While many of the above findings could be expected by the political science and economic theory, we believe providing actual evidence is an important step in documenting which of the predictions have actual empirical support.

The rest of the paper is organized as follows: in section 2, we describe our data and methodology; in section 3, we report our findings; in section 4 we discuss the implications of our results; and section 5 concludes.

2 Data and Methodology

2.1 Data

In our empirical analyses, we use individual-level data collected by the WVS. While the WVS carries out surveys about individual characteristics, values and opinion around the world since 1980s, previous surveys lacked questions on sector of employment. The question on the informal sector employment was added only to the most recent 6^{th} wave, and only for a select group of countries. Accordingly, we use the 6^{th} wave of WVS, which covers the period between 2010 and 2014, and ensures for proper and standardized wording of questions and answer options.[9,10] List of countries in our sample and their classification in terms of their geographical location, and average income level, along with the number of observations are presented in Table 1.

[7] We believe the former explanation seems more plausible than the latter, as these characteristics are unlikely to be observed by the employer.

[8] Throughout our analyses, we do not intend to imply one-way causality, but instead we intend to document *correlates* of the informal sector employment. Please note that the way to interpret causation may depend on whether one believes in the "exit" or "exclusion" of the individual from the formal sector. See Williams (2013) for a detailed discussion on this matter.

[9] Although WVS's question on informal employment was asked for a total of 9 countries, we exclude Iraq and Palestine due to potential problems as a result of the ongoing conflicts, which may blur the definition of formality due to lack of rule of law, thereby jeopardizing the quality of the predictions.

[10] Please note that each wave of WVS is carried out over a period of 3-4 years; Same survey is not repeated each year buy may take place in different years in different countries. For instance, the survey took place in China, Mexico and Peru in 2012; in Ecuador, South Africa and Egypt in 2013; and in Yemen in 2014.

Table 1: Countries in the Data Set

Country	Region/Income Category[11]	Observations
China	East Asia/Upper Middle Income	2,300
Ecuador	South America/Upper Middle Income	1,202
Egypt	North Africa/Lower Middle Income	1,523
Mexico	Central America/Upper Middle Income	2,000
Peru	South America/Upper Middle Income	1,210
South Africa	Southern Africa/Upper Middle Income	3,531
Yemen	West Asia/Lower Middle Income	1,000
Total		12,766

In our estimations, we use the self-reported sector of employment as our dependent variable.[12] The descriptive statistics for the question on sector of employment for the 12,766 individuals from 7 different countries in our sample are shown in Table 2.[13] Briefly, we observe that 39% of all respondents report that they are employed in the informal sector and there exists a considerable degree of variation across countries.

Table 2: Summary Statistics for Informal Sector Employment

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Gov.t/Public Institution	1851	405	97	258	167	343	401	178
	14.5%	17.6%	8.1%	12.9%	13.8%	9.7%	26.3%	17.8%
Private business/Industry	3651	575	238	788	656	862	305	230
	28.6%	25.0%	19.8%	39.4%	54.2%	24.4%	20.0%	23.0%
Non-profit organization	613	14	13	46	15	420	59	41
	4.8%	0.6%	1.1%	2.3%	1.2%	11.9%	3.9%	4.1%
Informal sector	5030	455	388	596	373	1907	760	551
	39.4%	19.8%	32.3%	29.8%	30.8%	54.0%	49.9%	55.1%
Have never worked	1111	798	0	306	0	0	0	0
	8.7%	34.7%	0.0%	15.3%	0.0%	0.0%	0.0%	0.0%
No answer	13	14	0	4	0	0	0	0
	0.1%	0.6%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
Don't know	511	39	466	4	0	0	0	0
	4.0%	1.7%	38.8%	0.2%	0.0%	0.0%	0.0%	0.0%
Observations	12766	2300	1202	2000	1210	3531	1523	1000

We use a total of 24 different independent variables under 5 categories: 1) demographics, 2) support for government involvement, 3) confidence in institutions, 4) political participation and 5) individual norms. Some of our *categorical* variables, such as gender or marital status are used as categorical dummy variables taking integer values of either 0 or 1, whereas most other

[11] The country classification is by the Development Policy and Analysis Division (DPAD) of the Department of Economic and Social Affairs of the United Nations Secretariat (UN/DESA).

[12] WVS explicitly provides "informal sector" as an answer option for the sector of employment. The other possible answers include "public institutions", "private institutions", and "private non-profit organizations". The exact statement of the question is "Are you working for the government or public institution, for private business or industry, or for a private non-profit organization? If you do not work currently, characterize your major work in the past. Do you or did you work for?"

[13] To give an idea about the size of informality at the macro-level in each country, we provide measures of informality by other sources in Appendix.

ordinal variables taking more than 2 values are re-scaled into the 0-1 interval from their original values so that we still have as many ordinal values as in the original coding, but all of them are mapped into the $[0-1]$ interval.[14]

Variables under the demographics category include sex, age, marital status, highest educational level attained, employment status, social class, scale of income and nature of task. We display the details of these variables in Table 3. We define the variables in the demographics category in a way so that all the variables are expected to be negatively correlated with the informal sector employment in accordance with the earlier literature.[15]

Table 3: Demographics

Sex	1 Male 0 Female
Age	1 30-49 (middle age) 0 Below 29 or above 50
Marital status	1 Married or living together 0 Divorced, separated, widowed, single
Social class (subjective)	1 Upper class 0 Working class, lower class
Scale of incomes	1 Tenth step 0 Lower step
Highest educational level attained	1 University - level education 0 High school or lower-level education
Employment status	1 Full-time 0 Other
Nature of tasks: manual vs. intellectual	1 Mostly non-manual tasks 0 Mostly manual tasks

Second category of variables are on individuals's opinions and preferences for government involvement in the economy. These variables include preference for income equality, preference for private versus state ownership of business and industry, belief in the government delivery and belief on whether competition is good or harmful. Respondents scale their opinions between 1 and 10 in integers, and we rescale them to the [0-1] interval. *A priori*, if the informal sector employees are not content with their working conditions, it would be reasonable to expect them to express their support for government involvement, which would generate a positively correlation between preferences for government involvement and the informal sector employment. The details of variables for this category are listed in Table 4.

[14]For instance, if individuals are asked to place their view about a matter between 1 and 10 in integers, we normalize these values to a scale between 0 and 1 by first subtracting 1, and second by dividing by 9; so that a value of $x \in \{1, 2, \dots 10\}$ is recoded as $(x-1)/9$. Further, for all variables except the ones associated with "confidence in governmental institutions" and "support for government involvement", a value closer to 1 is expected to be negatively correlated with the informal sector employment.

[15]See Williams and Martinez (2014), among others.

Table 4: Support for Government Involvement

Preference for income equality	1 Incomes should be made more equal 0 We need larger income differences as incentives for individual effort
Private vs. state ownership of business	1 Government ownership of business and industry should be increased 0 Private ownership of business and industry should be increased
Belief in government delivery	1 The government should ensure that everyone is provided for 0 People should provide for themselves
Competition good vs. harmful	1 Competition is harmful. It brings out the worst in people 0 Competition is good. It stimulates people to work hard and develop new ideas

Third category of variables shows individuals's confidence in institutions, markets and political conditions. The variables in this category are confidence in labor unions, confidence in major companies, confidence in government at the capital and confidence in civil services. Respondents are asked how much confidence they place in each of these institutions on a scale of 1 to 4 in integers, and we rescale these values to the [0-1] interval.[16] Details of the answers to these questions are presented in Table 5. *A priori*, one could expect variables associated with confidence in free-market institutions to be negatively correlated with the informal sector employment if informal employees are not happy with their work environments and compensation. Further, if the informal sector employees attribute their imperfect working conditions to free-market dynamics and private enterprises, while associating an interventionist government as a remedy to their problems, one could expect a negative (positive) correlation between confidence in market (government) institutions and the informal sector employment.

[16]Note that these variables do not measure the confidence people have in the currently-functioning institutional bodies, but instead their beliefs on the *concept* of these institutions in general. Hence, we believe that individuals's trust in political and economic institutions reveals important differences between informal and formal workers, that are specifically relevant to the political economy of the informal economy.

Table 5: Confidence in Institutions

Confidence in labor unions	1 Have a great deal of confidence 0 None at all
Confidence in major companies	1 Have a great deal of confidence 0 None at all
Confidence in the government (Central)	1 Have a great deal of confidence 0 None at all
Confidence in civil services	1 Have a great deal of confidence 0 None at all

Fourth category of variables are on political participation, and they address whether respondents vote in local and national elections, sign a petition for political purposes, attend lawful/peaceful demonstrations and actively/inactively become members of political parties. As we briefly discussed earlier, a number of studies in the literature claim that higher political participation is expected to reduce informality.[17,18] The details of the questions on political participation are shown in Table 6. Again, *a priori* one could expect a negative correlation between participation and informality.

Table 6: Political Participation

Vote in elections: local level	1 Always 0 Never
Vote in elections: national level	1 Always 0 Never
Political action: signing a petition	1 Have done 0 Haven't done
Political action: attending lawful protests	1 Have done 0 Haven't done
Active/Inactive member of political party	1 Active /Inactive member' 0 Not a member

Fifth and the last category of variables address individuals's personal norms and values, such as religiosity, patriotism and tax morale. Respondents of this category express their opinions and behaviors on how often they attend religious services, how willing they are to fight for their country and whether they find cheating on taxes as justifiable.[19] Details of these three variables

[17] By political participation, we refer to the channels through which individuals can affect the public policy or the way central or local governmental organization functions.

[18] While voting in elections or being an active or inactive member of a political party are obvious measures of political participation, we believe that individuals who have signed a petition or attended lawful demonstrations are also participating in the political processes indirectly by claiming their rights through legal and legitimate procedures and by using their power to change the way political authority functions.

[19] Following the previous literature (e.g. Torgler and Schneider, 2007; Heinemann and Schneider, 2011), instead of using individual's self-perception about their religiosity, we use answers on whether respondents *practice* religion or not, and if they do how frequently they do so. Similarly, as a proxy for patriotism, we believe that whether respondents would fight for their country or not is a better measure than how they proud they are of their

are listed in Table 7.

Table 7: Individual Norms

Frequency of attending religious services	1 More than once a week 0 Never, practically never
Willingness to fight for country	1 Yes 0 No
Cheating on taxes justifiable	1 Never justifiable 0 Always justifiable

2.2 Methodology

We use a maximum-likelihood probit model in our estimations due to the binary nature of the informal sector employment variable. Accordingly, we start our analyses first by regressing the informal sector employment variable over the discussed independent variables one-by-one, while controlling for demographic characteristics and country-fixed effects. The estimated probit regression is of the following form:

$$E(IS|X) = Pr(IS = 1|X) = \Phi\big(\beta_1 X_1 + \sum_{i=2}^{n} \beta_i X_i + \sum_{j=1}^{7} \theta_j D_j\big) \tag{1}$$

where the left-hand side of (1) is the probability of being employed in the informal sector and ϕ is the cumulative distribution function of the normal distribution, or simply the probit link. X_i refers to the set of independent variables: X_1 refers to the variable of interest, and other members of the X_i vector include demographic control variables, such as sex, age, marital status, social class and income level. D_j represents the dummy variables unique to the 7 countries to capture country-fixed effects.[20]

Second, note that regressing the likelihood of the informal sector employment to all of the discussed variables at the same time would induce multi-collinearity problems, since it is reasonable to expect independent variables in the same category to be correlated with one another.[21]

nationality. Also note that the last question in this category is commonly used in the literature to measure "tax morale" (i.e. Alm and Torgler, 2006; Torgler and Schneider, 2007). Specifically, individuals are asked to scale how much they agree with the statement that "cheating on taxes is never justifiable". Following the previous literature, we re-scale the tax morale variable in a way so that the answer "cheating on taxes is never justifiable" takes a value of 1.

[20]Note that while the probability of working in the informal sector increases with β_i, due to the probit model's nature, β_i does not directly measure how much the probability would increase in response to a one-unit increase in the independent variable. Hence, we report the *marginal effects* ($\frac{\partial Pr(IS=1)}{\partial X_1}$) of each independent variable, which can be interpreted as the change in the probability of the informal sector employment when the independent variable increases by one unit.

[21]For instance, it would not be surprising if individuals who vote in national elections are highly likely to vote

Accordingly, using principal component analysis (PCA): for each category we create a single variable out of a number of listed variables, i.e. we create 5 composite variables from 4 categories of variables, excluding demographics and dividing "confidence in institutions" into 2 subcategories: 1) confidence in governmental institutions and 1) confidence in market institutions. In brief, PCA investigates all the variance in a set of variables and re-organizes them into a new set of independent components. Then, we reduce the predictors to a single composite variable via the weighted sum of these components. We use the following regression model relying on such composite variables:

$$E(IS|X) = Pr(IS = 1|X) = \Phi\big(\sum_{i=1}^{5} \beta_i X_i + \sum_{i=6}^{n} \beta_i X_i + \sum_{j=1}^{7} \theta_j D_j\big) \tag{2}$$

where first five independent variables refer to each of the five categories, namely support for government involvement, confidence in market institutions, confidence in the governmental institutions, political participation and individual norms. Others independent variables are demographic controls, including sex, marital status, age, social class, and income level. Similar to the previous regression model, we use country-specific dummy variables to control for country-fixed differences.[22]

3 Results

In this section, we report and discuss our findings from the estimations described by (1) and (2). In doing so, we first report our results for different categories of independent variables, and next we report our estimation results from regressions using composite variables.

3.1 Demographics

We first estimate the probit model described in (1) using income, sex, age, marital status and social class as our demographic control variables.[23]

in local elections, as well.

[22]For robustness purposes, we also provide the estimated results of within-country regressions in Appendix. Some of the results that hold for the larger panel of countries do not hold for some specific countries, which we mainly attribute to the heterogeneity of countries and small sample sizes in specific countries, thereby causing the standard errors to increase and pushing coefficients to the insignificant range. However, overall, we can say that the obtained results are reasonably robust to country-specific differences.

[23]We also use education, employment status and nature of task as other possible control variables mainly for robustness check, yet, we do not add them in our benchmark demographic control variables so as to avoid

We report our findings from the demographic variable estimations in Table 8. In all of our regressions, we document that control variables have negative and significant coefficients, which implies that male, middle-aged, married, high-income and white-collar individuals are less likely to work in the informal sector. As discussed briefly, marginal effect values, and *not* the estimated coefficients themselves, are meaningful in gathering quantitative insights from the estimation results. Marginal effects reported in Table 8 display that of the listed demographic variables, university attendance and gender differences generate the most sizeable differences in the probability of being employed in the informal sector. This finding is consistent with the previous development literature, which documents that female and less-educated workers are more frequently employed in the informal sector in developing countries.[24]

Similarly, middle-aged in the labor force are less likely to be informal sector workers. This result could be due to the fact that retired people are employed mostly unregistered in order to get full pensions from the government and young workers might need to spend some time in the labor market until they manage to land in a formal job, and/or that employers demand middle-aged workers more, possibly due to their higher marginal contribution in a longer time perspective. Note that this U-shaped relationship between age and informality is also in line with the received literature.[25]

We document that those who completed university education are less likely to be informal workers. Estimated coefficient of the nature of task is also negative and significant. The magnitudes of the marginal effects are relatively high both for education and for nature of task. In other words, uneducated workers who carry out low-skill manual jobs are more likely to be employed in the informal sectors. These findings jointly can be interpreted as that either human capital is demanded less in the informal sector than the formal sector and/or that less educated individuals choose to work in the informal sector, possibly due to a better fit of their professional skills.

Finally, employment type and status are also significantly related to the informality of employment. We report that those who work full-time are much less likely to be employed in the informal sector, with the magnitude of the marginal effect is notably high in absolute terms.

multi-collinearity problems.

[24] Among others, see McCaig and Pavcnik (2015) and Williams *et al* (2016). As an example from the developing economies literature, see Tansel(1999).

[25] See, for instance, Williams and Martinez (2014).

Table 8: Estimation Results: Demographics

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
	marg. eff.	-0.224^{***}			-0.171^{***}	-0.177^{***}
Education (Attended University)	p value	(0.000)			(0.000)	(0.000)
	marg. eff.		-0.455^{***}		-0.442^{***}	
Employment Status (Full-Time)	p value		(0.000)		(0.000)	
	marg. eff.			-0.103^{***}		-0.046^{**}
Nature of Task (Non-Manual)	p value			(0.000)		(0.012)
	marg. eff.	-0.154^{***}	-0.116^{***}	-0.094^{***}	-0.079^{***}	-0.062^{**}
Scales of Income (High-Income)	p value	(0.000)	(0.000)	(0.000)	(0.001)	(0.011)
	marg. eff.	-0.208^{***}	-0.155^{***}	-0.047^{***}	-0.152^{***}	-0.044^{***}
Sex (Male)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.093^{***}	-0.032^{***}	-0.064^{***}	-0.027^{**}	-0.056^{***}
Middle Age (29-50)	p value	(0.000)	(0.004)	(0.000)	(0.014)	(0.000)
	marg. eff.	-0.077^{***}	-0.050^{***}	-0.037^{***}	-0.061^{***}	-0.044^{***}
Marital Status (Married)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.041^{***}	-0.061^{***}	-0.080^{***}	-0.031^{*}	-0.050^{***}
Social Class (White-Collar)	p value	(0.009)	(0.000)	(0.000)	(0.065)	(0.001)
Observations		10.532	10.546	7.793	10.532	7.770
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 10% level. **Significant at 5% level. ***Significant at the 1% level.
All the specifications include the country dummies.

3.2 Support for Government Involvement

Next, we use self-reported opinions of individuals in order to estimate the relationship between the informal sector employment and support for government involvement in the economy. We report our findings in Table 9.

Our estimation results suggest that those who are employed in the informal sector are more likely to support economic systems which require more government involvement in the economy, whether it being in the form of redistribution or direct government ownership of business and industry. The causality could go in both ways: either individuals employed in the informal sector prefer an economically strong state, which uses its power to make incomes more equal, provide for those who are in need and even nationalize businesses and industries; and/or those who support strong government involvement end up working in the informal sector due to lesser demand by employers. Note, however, that the latter interpretations is less likely, as these preferences often cannot be observed by the employer prior to hiring. Similarly, the informal sector employees are more likely to have stronger negative sentiments about the nature of competition than their formal sector counterparts, possibly either due to their working conditions of their own choice, and/or due to the selection processes of employers.[26]

[26]While exploring the roots of the pro-government support of the informal workers is beyond the scope of this paper, a possible channel could be that informal workers have a high opinion of an interventionist government because they constitute the most disadvantaged segment of the labor force, and hence government regulations and

Table 9: Estimation Results: Support for Government Involvement

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
	marg. eff.	0.017				0.029^{*}
Preference for Egalitarian Income	p value	(0.264)				(0.072)
	marg. eff.		0.036^{**}			0.033^{*}
Against Private Ownership	p value		(0.020)			(0.052)
	marg. eff.			0.048^{***}		0.045^{***}
Belief in Government Delivery	p value			(0.003)		(0.009)
	marg. eff.				0.052^{***}	0.043^{**}
Competition is Bad	p value				(0.004)	(0.023)
	marg. eff.	-0.200^{***}	-0.108^{***}	-0.211^{***}	-0.211^{***}	-0.210^{***}
Scales of Income (High-Income)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.216^{***}	-0.151^{***}	-0.217^{***}	-0.212^{***}	-0.212^{***}
Sex (Male)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.104^{***}	-0.033^{***}	-0.105^{***}	-0.034^{***}	-0.101^{***}
Middle-Age (29-50)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.065^{***}	-0.048^{***}	-0.065^{***}	-0.067^{***}	-0.064^{***}
Marital Status (Married)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.085^{***}	-0.061^{***}	-0.083^{***}	-0.081^{***}	-0.082^{***}
Social Class (White-Collar)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		10.276	10.080	10.347	10.298	9.946
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 10% level. **Significant at 5% level. ***Significant at the 1% level.
All the specifications include the country dummies.

3.3 Confidence in Institutions

We use individuals's self-reported confidence evaluations in institutions to detect if there are significant linkages between the informal sector employment and support for confidence in institutions. We report our findings in Table 10. We document statistically significant associations between the informal sector employment and confidence in unions, major companies and government, but not with confidence in civil services. Our findings suggest that while the informal sector workers are more likely to confide in the central government, they are less likely to confide in major companies, and trade unions.[27] These results are consistent with our earlier findings that the informal sector workers are more likely to have more favorable views about the state, compared to free market institutions, although the direction of the causality is ambiguous: this result could either be supply-driven or demand-driven, or both, i.e. either the informal sector employees form pro-governmental preferences, or employers reach out more to pro-market workers conditional on these preferences being observable by employers.

transfers could alleviate their working conditions and living standards. As mentioned earlier, lack of government interference could induce sub-standard working conditions, less job security and lower pay for most of the informal workers, and hence a more interventionist governments could have a positive first-order improvement in the lives of the informal sector workers.

[27] It should be noted that the wording of the survey questions does not address respondents's opinions on *current* government or any specific trade union or company functioning in the market, but rather the *concept* of these institutions in general. In other words, workers in the informal sector seem to believe more in the government than trade unions or major companies as a trustworthy institutional body.

Table 10: Estimation Results: Confidence in Institutions

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
	marg. eff.	-0.054^{***}				-0.074^{***}
Confidence in Unions	p value	(0.003)				(0.000)
	marg. eff.		-0.023			-0.037^{*}
Confidence in Major Companies	p value		(0.180)			(0.063)
	marg. eff.			0.040^{**}		0.083^{***}
Confidence in Government	p value			(0.015)		(0.000)
	marg. eff.				0.015	0.020
Confidence in Civil Services	p value				(0.405)	(0.373)
	marg. eff.	-0.209^{***}	-0.207^{***}	-0.200^{***}	-0.206^{***}	-0.215^{***}
Scales of Income (High-Income)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.198^{***}	-0.199^{***}	-0.215^{***}	-0.209^{***}	-0.198^{***}
Sex (Male)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.111^{***}	-0.106^{***}	-0.103^{***}	-0.104^{***}	-0.109^{***}
Middle Age (29-50)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.065^{***}	-0.064^{***}	-0.066^{***}	-0.065^{***}	-0.061^{***}
Marital Status (Married)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.082^{***}	-0.088^{***}	-0.085^{***}	-0.084^{***}	-0.087^{***}
Social Class (White-Collar)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		9.348	9.718	10.794	10.126	9.014
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 10% level. **Significant at 5% level. ***Significant at the 1% level.
All the specifications include the country dummies.

3.4 Political Participation

We next turn to exploring whether the informal sector employment associates with political acts, beliefs and attitudes. Our findings via our listed variables suggest that political participation is negatively correlated with the informal sector employment, as shown in Table 11. Individuals who actively or inactively engage in political processes or who use legal ways to defend their rights are less likely to be employed in the informal sector. Specifically, active political membership correlates most strongly with the informal sector employment, as its marginal effect has the highest value in absolute terms, compared to the other political participation variables. An individual who is a member of a political party or a political movement is 10% less likely to be employed in the informal sector, compared to her non-member counterpart. Voting in local and national elections, which can be considered as forms of inactive political participation, is also significantly and negatively correlated with the informal sector employment.

Although these findings do not necessarily imply causation, in accordance with the arguments put forward in the previous literature, our results could potentially be interpreted as that, those whose preferences are reflected more in the public policy could have less incentive to work in the informal sectors.[28] Citizens who directly or indirectly participate in political processes either at

[28]For further discussion on the connection between sector of employment and political acts, beliefs and attitudes, see Torgler *et al* (2010); Teobaldelli and Schneider (2012), among others.

the national or local level are more likely to be represented in the decision making and affect legislation and regulations more than others who do not involve with politics.[29] Yet, these findings do not rule out the possibility that politically-active members of the workforce may not seek or accept informal jobs as this may be detrimental to their political prospects or against the ideological stance.[30]

Table 11: Estimation Results: Political Participation

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vote in Local Elections	marg. eff.	-0.037^{***}					-0.036^{***}	
	p value	(0.001)					(0.000)	
Vote in National Elections	marg. eff.		-0.050^{***}					-0.051^{***}
	p value		(0.000)					(0.000)
Signing a Petition	marg. eff.			-0.077^{***}			-0.048^{**}	-0.048^{**}
	p value			(0.000)			(0.012)	(0.012)
Engaging in Demonstration	marg. eff.				-0.081^{***}		-0.058^{***}	-0.059^{***}
	p value				(0.000)		(0.004)	(0.003)
Active Political Membership	marg. eff.					-0.103^{***}	-0.085^{***}	-0.090^{***}
	p value					(0.000)	(0.000)	(0.000)
Scales of Income (High-Income)	marg. eff.	-0.226^{***}	-0.216^{***}	-0.187^{***}	-0.182^{***}	-0.201^{***}	-0.188^{***}	-0.179^{***}
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sex (Male)	marg. eff.	-0.223^{***}	-0.225^{***}	-0.204^{***}	-0.208^{***}	-0.213^{***}	-0.208^{***}	-0.210^{***}
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	marg. eff.	-0.105^{***}	-0.104^{***}	-0.098^{***}	-0.098^{***}	-0.099^{***}	-0.095^{***}	-0.094^{***}
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marital Status (Married)	marg. eff.	-0.068^{***}	-0.068^{***}	-0.058^{***}	-0.062^{***}	-0.064^{***}	-0.063^{***}	-0.060^{***}
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Social Class (White-Collar)	marg. eff.	-0.081^{***}	-0.081^{***}	-0.085^{***}	-0.086^{***}	-0.083^{***}	-0.085^{***}	-0.085^{***}
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		9.420	9.434	9.863	10.042	10.557	8.628	8.641
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 10% level. **Significant at 5% level. ***Significant at the 1% level.
All the specifications include the country dummies.

3.5 Individual Norms

There is a large body of literature which associates religiosity and tax morale to the informal sector employment. We aim to contribute to this discussion by providing micro-level self-reported evidence on the connection between individual norms (religiosity, patriotism and tax morale) and the sector of employment, and we report our findings in Table 12. Our results reveal that religiosity and tax morale are significantly and negatively correlated with the informal sector employment, whereas patriotism does not have a significant relationship.

Schneider and Heinemann (2011) argue, using macro-level data, that countries with more

[29] At the local level, for instance, it is probably much easier for a politically-active individual to access public services or get things done in ways she prefers, especially in an environment which supports democratic institutions.

[30] An alternative mechanism behind the correlation between the informal sector employment and political participation could be that workers who are employed in the informal sector have less incentive to affect the public policy, as changes in the public policy may not affect them as much as those who are employed in the formal sector.

religious citizens, *ceteris paribus*, do not have smaller sizes of informality. However, our findings suggest that individuals who practice religion more often are less likely to be employed in the informal sector. Accordingly, our findings could be considered evidence on the differences on the macro-level and micro-level relationship between informality and religiosity. As it was suggested by Schneider and Heinemann (2011), one reason for the observed negative relationship might be that religion imposes an additional immaterial cost of evading taxes, especially when an individual perceives the government as a legitimate institution. Of course, an alternative interpretation is that informal workers tend to be more religious individuals, as they usually represent a more vulnerable segment of the workforce.

Similarly, we document that tax morale negatively correlates with the informal sector employment, suggesting that workers who believe avoiding taxes is never justifiable are less likely to be employed in the informal sector. However, we find it noteworthy to emphasize that the magnitude of the marginal effect is relatively small, thereby casting doubt on the use of tax morale as a proxy for informality, which has been a common practice in the earlier literature.

Table 12: Estimation Results: Individual Norms

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
	marg. eff.	-0.115^{**}			-0.106^{***}	-0.112^{***}
Practice Religion	p value	(0.021)			(0.000)	(0.000)
	marg. eff.		-0.009			-0.008
Patriotism	p value		(0.395)			(0.470)
	marg. eff.			-0.029^{***}	-0.025^{**}	-0.024^{**}
Tax Morale	p value			(0.006)	(0.021)	(0.035)
	marg. eff.	-0.204^{***}	-0.201^{***}	-0.214^{***}	-0.207^{***}	-0.200^{***}
Scales of Income (High-Income)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.215^{***}	-0.221^{***}	-0.212^{***}	-0.213^{***}	-0.215^{***}
Sex (Male)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.103^{***}	-0.101^{***}	-0.108^{***}	-0.107^{***}	-0.105^{***}
Middle Age (29-50)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.054^{***}	-0.062^{***}	-0.063^{***}	-0.054^{***}	-0.053^{***}
Marital Status (Married)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	marg. eff.	-0.085^{***}	-0.082^{***}	-0.088^{***}	-0.088^{***}	-0.087^{***}
Social Class (White-Collar)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		10.320	9.768	10.125	9.903	9.209
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 10% level. **Significant at 5% level. ***Significant at the 1% level.
All the specifications include the country dummies.

3.6 Composite Variables

After estimating the relationship between the informal sector employment and a select set of independent variables one category at a time, we next turn to regressing the informal sector employment on several composite variables at the same time, as in equation (2). Each of

the composite variables refers to one of the discussed categories in the previous subsections.[31] Throughout this procedure, we control for demographic variables and country-fixed factors for robustness purposes.

We construct the composite variables to be used for our PCA estimations as follows: Support for Government Involvement variable is comprised of i) Preference for Egalitarian Income, ii) Against Private Ownership, iii) Belief in Government Delivery, iv) Competition is Bad variables; Confidence in Market Institutions variable is comprised of i) Confidence in Unions, ii) Confidence in Major Companies; Confidence in Government Institutions variable is comprised of i) Confidence in Government, ii) Confidence in Civil Services; Political Participation variable is comprised of i) Vote in Local Elections, ii) Vote in National Elections, iii) Signing a Petition, iv) Engaging in Demonstration, v) Active Political Membership and Individual Norm variable is comprised of i) Practice Religion, ii) Tax Morale.[32]

Our estimation results, which we report in Table 13 suggest that all composite variables are significantly correlated with the informal sector employment under most of the specifications, in accordance with our previous findings. Of the five indices, we find that confidence in government has the largest marginal effect in absolute value, followed by political participation composite variable.[33] Overall, we believe it is fair to argue that our estimation results by the use of composite variables provide further support for the documented relationships between the informal sector employment and other socio-demographic characteristics and political attitude variables.

[31] The reason why we do not regress informality to all 25 independent variables at the same time is the likelihood of multicollinearity problems. Our results reveal that composite variables generated via principal component analysis are much less correlated with each other, thereby relieving multicollinearity concerns.

[32] The quantitative details of the PCA procedure is described in detail in Appendix.

[33] The coefficient value for the individual norms index moves towards the insignificant range when both nature of the task and education variables are controlled for, possibly due to multicollinearity issues.

Table 13: Estimation Results: Composite Variables

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
	marg. eff.	0.010^{**}	0.017^{***}	0.026^{***}	0.023^{***}	0.016^{***}
Support for Government Involv.	p value	(0.047)	(0.001)	(0.000)	(0.000)	(0.003)
	marg. eff.	-0.021^{***}	-0.020^{***}	-0.017^{***}	-0.017^{***}	-0.012^{*}
Confidence in Market institution	p value	(0.000)	(0.001)	(0.000)	(0.006)	(0.079)
	marg. eff.	0.089	0.095^{***}	0.052^{**}	0.015^{**}	0.020^{***}
Confidence in Government	p value	(0.000)	(0.000)	(0.018)	(0.020)	(0.004)
	marg. eff.	-0.030^{***}	-0.031^{***}	-0.014^{***}	-0.011^{**}	-0.023^{***}
Political Participation	p value	(0.000)	(0.000)	(0.000)	(0.027)	(0.000)
	marg. eff.	-0.020^{***}	-0.022^{***}	-0.005	-0.004	-0.019^{***}
Individual Norms	p value	(0.002)	(0.001)	(0.441)	(0.489)	(0.005)
	marg. eff.				-0.164^{***}	-0.172^{***}
Education (Attended University)	p value				(0.000)	(0.000)
	marg. eff.					-0.434^{***}
Employment Status (Full-Time)	p value					(0.000)
	marg. eff.			-0.076^{***}	-0.028	
Nature of Task (non-manual)	p value			(0.000)	(0.176)	
	marg. eff.		-0.217^{***}	-0.111^{***}	-0.073^{***}	-0.092^{***}
Scales of Income (High-Income)	p value		(0.000)	(0.000)	(0.007)	(0.002)
	marg. eff.	-0.204^{***}	-0.209^{***}	-0.040^{***}	-0.036^{***}	-0.147^{***}
Sex (Male)	p value	(0.000)	(0.000)	(0.001)	(0.003)	(0.000)
	marg. eff.	-0.101^{***}	-0.102^{***}	-0.066^{***}	-0.061^{***}	-0.032^{***}
Middle Age (29-50)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.018)
	marg. eff.	-0.058^{***}	-0.059^{***}	-0.048^{***}	-0.054^{***}	-0.048^{***}
Marital Status (Married)	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
	marg. eff.	-0.132^{***}	-0.082^{***}	-0.065^{***}	-0.040^{**}	-0.025
Social Class (White-Collar)	p value	(0.000)	(0.000)	(0.000)	(0.015)	(0.188)
Observations		7.368	7.223	5.510	5.496	7.190
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 10% level. **Significant at 5% level. ***Significant at the 1% level.
All the specifications include the country dummies.

4 Discussion

In this section, we discuss the policy and welfare implications of our findings. Earlier political science literature on voter turnout documents that electorates with lower socio-economic status are less likely to cast vote in elections and participate in pluralistic processes.[34] Our findings are in accordance with this literature, and contributes on the informal sector employment dimension: our findings reveal that the informal sector employees, who tend to have lower socio-economic status, are considerably less likely to participate in democratic processes, either actively or inactively. This suggests that in countries with sizable informal sectors, unless governmental bodies exert a genuine effort to reach out to the informal sector employees, they could easily miss out on the difficulties experienced by a large body of disadvantaged employees. Further, our findings reveal that the informal sector employees put more trust in the government than market institutions as they hope for an interventionist government to improve their living conditions while at the same time waiting acquiescently. This passive state of expectancy from the government might contribute to germinating dissent among disadvantaged workers, unless they feel heard and understood. Accordingly, we believe that governmental authorities who aim to improve on democratic pluralism and aim to lessen masked dissent should be open to seeking for new methods beyond the conventional ones for the informal sector employees to voice their concerns while not having to worry about getting penalized for their working conditions when speaking out candidly.

5 Conclusions

In this paper, we analyze the relationship between the informal sector employment and socio-demographic attributes, political opinions and practices, and norms of individuals at the micro-level for a panel of seven developing countries, where the informal sector employment is widespread. Our results document that individual characteristics, such as gender, age, marital status and socio-economic status are strong correlates of informal sector employment. Further, confidence in government institutions as well as support for government involvement in the economy correlate positively, while political participation correlates negatively with the informal sector employment. Individuals norms and values, such as religiosity and tax morale also correlate negatively

[34] For an elaborate discussion, see Blais (2006), among others.

with the informal sector employment.

Although this study provides direct evidence on the link between many micro-level variables and the informal sector employment, thereby shedding light into the political economy of the informal sector employment in developing countries, a more comprehensive data set which involves respondents from a larger number of countries could be revealing. Moreover, in this paper while we try only to explore the *associations* between micro-level variables and the informal sector employment, we believe unveiling *causal* channels would be enlightening, especially for policy-making purposes. Many of our results could be considered as a form of empirical testing on a critical subject in which data quality and measurement issues generate first-order problems. This paper, by relying directly on self evaluations of individuals who have the best information on the degree of their informality, addresses which predictions of political science and economic theory hold true and intends to contribute to the literature on understanding the nature of the informal employment better. We leave causal explorations of the documented correlations to future research.

References

[1] Alm, J., and Torgler, B. (2006). Culture differences and tax morale in the United States and in Europe. *Journal of Economic Psychology*, 27 (2), 224-246.

[2] Acar, E. Ö., and Tansel, A. (2016). Defining and Measuring Informality: The Case of Turkish Labor Market. *Sosyoekonomi*, 24(28).

[3] Blais, A. (2006). What Affects Voter Turnout?. *Annual Review of Political Science*, 9, 111-125.

[4] Buehn, A., and Schneider, F. (2012). Shadow economies around the world: Novel insights, accepted knowledge, and new estimates. *International Tax and Public Finance*, 19 (1), 139-171.

[5] Comola, M., and de Mello, L. (2013). How does decentralized minimum wage setting affect employment and informality? The case of Indonesia. *Review of Income and Wealth*, 57 (1), S79-S99.

[6] Dell'Anno, R. (2009). Tax evasion, tax morale and policy maker's effectiveness. *The Journal of Socio-Economics*, 38 (6), 988-997.

[7] Elgin, C., and Oztunali, O. (2012). Shadow Economies around the World: Model Based Estimates. Bogazici University Department of Economics Working Papers, 2012-05.

[8] Falco, P. (2014). Does Risk Matter for Occupational Choices? Experimental Evidence from an African Labour Market. *Labour economics*, 28, 96-109.

[9] Hart, K. (2008). Informal Economy, The New Palgrave Dictionary of Economics. Second Edition, Eds.Steven N. Durlauf and Lawrence E. Blume. Palgrave Macmillan

[10] Hatipoglu, O., and Ozbek, G. (2011). On the political economy of the informal sector and income redistribution. *European Journal of Law and Economics*, 32 (1), 69-87.

[11] Heinemann, F., and Schneider, F. (2011). Religion and the shadow economy. *ZEW-Centre for European Economic Research Discussion Paper*, 11 (038).

[12] Hug, S., and Spörri, F. (2011). Referendums, trust, and tax evasion. *European Journal of Political Economy*, 27 (1), 120-131.

[13] Khamis, M. (2011).Does the minimum wage have a higher impact on the informal than on the formal labour market? Evidence from quasi-experiments. *Applied Economics*, 45 (4), 477-495.

[14] Ihrig, J., and Moe, K.S., (2004). Lurking in the shadows: The informal sector and government policy. *Journal of Development Economics*, 73 (2), 541-557.

[15] Lago-Penas, I. and Lago-Penas, S. (2010). The determinants of tax morale in comparative perspective: Evidence from European countries. *European Journal of Political Economy*, 26 (4), 441-453.

[16] McCaig, B. and Pavcnik, N. (2015). Informal Employment in a Growing and Globalizing Low-Income Country, *American Economic Review*, 105 (5), 545-550.

[17] Nguimkeu, P. (2014). A Structural Econometric Analysis of the Informal Sector Heterogeneity. *Journal of Development Economics*, 107, 175-191.

[18] Nguimkeu, P. (2015). An Estimated Model of Informality with Constrained Entrepreneurship. Working Paper.

[19] Schneider, F., (2005). Shadow economies around the World: What do we really know? *European Journal of Political Economy*, 21, 598-642.

[20] Schneider, F., Buehn, A., and Montenegro, C. E. (2010). New estimates for the shadow economies all over the world. *International Economic Journal*, 24(4), 443-461.

[21] Schneider F., and Enste, D. H., (2000). Shadow Economies: Sizes, causes and consequences. *Journal of Economic Perspectives*, 38, 77-114.

[22] Tansel, A. (1999). Formal versus informal sector choice of wage earners and their wages in Turkey. Economic Research Forum (ERF) Working paper no: 199905, Cairo, Egypt.

[23] Teobaldelli, D., and Schneider, F. (2012). Beyond the veil of ignorance: The influence of direct democracy on the shadow economy. CESifo Working Paper MO3749, University of Munich, Munich.

[24] Torgler, B., and Schaltegger, C. A. (2005). Tax morale and fiscal policy. Unpublished Working paper. Center for Research in Economics, Management and the Arts.

[25] Torgler, B., and Schneider, F. (2007). What shapes attitudes toward paying taxes? Evidence from multicultural European countries. *Social Science Quarterly*, 88(2), 443-470.

[26] Torgler, B., and Schneider, F., & Schaltegger, C. A. (2010). Local autonomy, tax morale, and the shadow economy. *Public Choice*, 144(1-2), 293-321.

[27] Williams, C. C. (2013). Evaluating cross?national variations in the extent and nature of informal employment in the European Union. *Industrial Relations Journal*, 44(5-6), 479-494.

[28] Williams, C., and Martinez, A. (2014). Is the informal economy an incubator for new enterprise creation? a gender perspective. *International Journal of Entrepreneurial Behavior & Research*, 20(1), 4-19.

[29] Williams, C. C., Shahid, M. S., and Martinez, A. (2016). Determinants of the level of informality of informal micro-enterprises: Some evidence from the city of Lahore, Pakistan. *World Development*, 84, 312-325.

[30] World Values Survey, Wave 6 2010-2014 Official Aggregate v.20150418. World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: Asep/JDS, Madrid SPAIN.

Appendix

Summary Statistics of the Socio-Demographic Variables by Country

Table 14: Summary Statistics: Sex

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Male	6,319	1,168	582	1,000	607	1,705	762	498
	49.5%	50.8%	48.4%	50.0%	50.2%	48.3%	50.0%	49.8%
Female	6,447	1,132	620	1,000	603	1,826	762	502
	50.5%	49.2%	51.6%	50.0%	49.8%	51.7%	50.0%	50.2%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 15: Summary Statistics: Age

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
18-29	4,315	501	407	784	409	1,359	498	361
	33.8%	21.8%	33.9%	39.2%	33.8%	38.5%	32.7%	36.1%
30-49	5,234	1,063	447	806	494	1.303	646	470
	41.0%	46.2%	37.2%	40.3%	40.8%	36.9%	42.4%	47.0%
50 and more	3,217	736	347	410	307	869	379	169
	25.2%	32.0%	28.9%	20.5%	25.4%	24.6%	24.9%	16.9%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	38.83	42.29	39.81	37.48	39.48	37.72	38.8	35.59
Max	99	75	97	93	88	85	99	90
Std. Dev	15.37	14.37	16.14	15.18	16.42	15.67	15.16	13.28

Table 16: Summary Statistics: Marital Status

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Married	6,702	1,923	484	908	392	1,193	1,014	781
	52.5%	83.6%	40.3%	45.4%	32.4%	33.8%	66.6%	78.1%
Living together	1,251	21	230	364	295	350	0	0
	9.8%	0.9%	19.1%	18.2%	24.4%	9.9%	0.0%	0.0%
Divorced	217	30	40	46	28	46	9	19
	1.7%	1.3%	3.3%	2.3%	2.3%	1.3%	0.6%	1.9%
Separated	268	5	53	112	63	21	11	9
	2.1%	0.2%	4.4%	5.6%	5.2%	0.6%	0.7%	0.9%
Widowed	664	74	61	76	52	237	117	42
	5.2%	3.2%	5.1%	3.8%	4.3%	6.7%	7.7%	4.2%
Single	3,664	251	334	492	381	1,681	372	149
	28.7%	10.9%	27.8%	24.6%	31.5%	47.6%	24.4%	14.9%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 17: Summary Statistics: Highest Educational Level Attained

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
No formal education	1,034	136	11	72	30	85	303	398
	8.1%	5.9%	0.9%	3.6%	2.5%	2.4%	19.9%	39.8%
Incomplete primary school	728	0	55	224	80	155	62	151
	5.7%	0.0%	4.6%	11.2%	6.6%	4.4%	4.1%	15.1%
Complete primary school	1,455	449	190	298	97	215	136	78
	11.4%	19.5%	15.8%	14.9%	8.0%	6.1%	8.9%	7.8%
Incomplete secondary school:	843	0	258	100	131	254	56	42
technical type	6.6%	0.0%	21.5%	5.0%	10.8%	7.2%	3.7%	4.2%
Complete secondary school:	2,962	1,070	345	476	322	275	414	64
technical type	23.2%	46.5%	28.7%	23.8%	26.6%	7.8%	27.2%	6.4%
Incomplete secondary school:	1,238	0	7	160	91	907	26	39
university type	9.7%	0.0%	0.6%	8.0%	7.5%	25.7%	1.7%	3.9%
Complete secondary school:	2,349	380	2	292	167	1,292	134	77
university type	18.4%	16.5%	0.2%	14.6%	13.8%	36.6%	8.8%	7.7%
university-level education,	715	0	194	112	134	169	43	63
without degree	5.6%	0.0%	16.1%	5.6%	11.1%	4.8%	2.8%	6.3%
University - level education,	1,417	267	139	264	157	148	350	86
with degree	11.1%	11.6%	11.6%	13.2%	13.0%	4.2%	23.0%	8.6%
Inapplicable (No education)	26	0	0	0	0	28	0	0
	0.2%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%
No answer	0	0	0	2	0	0	0	0
	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Don't know	0	0	0	0	0	0	0	2
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 18: Summary Statistics: Employment Status

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Full-Time	3,817	1,185	355	488	340	936	350	158
	29.9%	51.5%	29.5%	24.4%	28.1%	26.5%	23.0%	15.8%
Part time	1,353	455	91	196	88	205	203	106
	10.6%	19.8%	7.6%	9.8%	7.3%	5.8%	13.3%	10.6%
Self employed	1,391	71	290	312	325	120	142	126
	10.9%	3.1%	24.1%	15.6%	26.9%	3.4%	9.3%	12.6%
Retired	906	225	43	64	71	395	76	32
	7.1%	9.8%	3.6%	3.2%	5.9%	11.2%	5.0%	3.2%
Housewife	2,400	173	255	540	194	254	570	416
	18.8%	7.5%	21.2%	27.0%	16.0%	7.2%	37.4%	41.6%
Students	970	74	96	124	129	399	102	42
	7.6%	3.2%	8.0%	6.2%	10.7%	11.3%	6.7%	4.2%
Unemployed	1,851	58	72	260	61	1,208	78	120
	14.5%	2.5%	6.0%	13.0%	5.0%	34.2%	5.1%	12.0%
Other	77	58	0	14	2	0	2	0
	0.6%	2.5%	0.0%	0.7%	0.2%	0.0%	0.1%	0.0%
Not applicable	0	0	0	4	0	0	0	0
	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
No answer; Refused	13	0	0	0	0	14	0	0
	0.1%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 19: Summary Statistics: Social Class (Subjective)

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Upper class	115	5	5	24	13	46	23	6
	0.9%	0.2%	0.4%	1.2%	1.1%	1.3%	1.5%	0.6%
Upper middle class	1,557	83	130	412	237	388	196	113
	12.2%	3.6%	10.8%	20.6%	19.6%	11.0%	12.9%	11.3%
Lower middle class	4,226	927	621	812	415	583	605	263
	33.1%	40.3%	51.7%	40.6%	34.3%	16.5%	39.7%	26.3%
Working class	3,421	720	227	406	385	840	426	422
	26.8%	31.3%	18.9%	20.3%	31.8%	23.8%	28.0%	42.2%
Lower class	3,115	465	216	336	126	1,511	273	184
	24.4%	20.2%	18.0%	16.8%	10.4%	42.8%	17.9%	18.4%
Not applicable	0	0	1	0	0	0	0	0
	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
No answer	38	28	1	6	8	0	0	0
	0.3%	1.2%	0.1%	0.3%	0.7%	0.0%	0.0%	0.0%
Don't know	281	74	0	4	25	159	0	12
	2.2%	3.2%	0.0%	0.2%	2.1%	4.5%	0.0%	1.2%
Observations	12,766	2300	1202	2000	1210	3531	1523	1000

Table 20: Summary Statistics: Scale of Income

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Lower step	1,545	127	34	600	79	318	174	222
	12.1%	5.5%	2.8%	30.0%	6.5%	9.0%	11.4%	22.2%
second step	1,226	235	81	372	74	169	146	145
	9.6%	10.2%	6.7%	18.6%	6.1%	4.8%	9.6%	14.5%
Third step	1,583	340	167	250	139	321	189	170
	12.4%	14.8%	13.9%	12.5%	11.5%	9.1%	12.4%	17.0%
Fourth step	1,634	370	184	160	183	381	273	91
	12.8%	16.1%	15.3%	8.0%	15.1%	10.8%	17.9%	9.1%
Fifth step	2,196	421	254	166	365	614	236	144
	17.2%	18.3%	21.1%	8.3%	30.2%	17.4%	15.5%	14.4%
Sixth step	1,774	308	221	124	185	586	254	94
	13.9%	13.4%	18.4%	6.2%	15.3%	16.6%	16.7%	9.4%
Seventh step	1,149	168	141	96	99	441	140	60
	9.0%	7.3%	11.7%	4.8%	8.2%	12.5%	9.2%	6.0%
Eigth step	843	78	83	84	36	427	105	27
	6.6%	3.4%	6.9%	4.2%	3.0%	12.1%	6.9%	2.7%
Nineth step	217	5	32	48	12	106	3	10
	1.7%	0.2%	2.7%	2.4%	1.0%	3.0%	0.2%	1.0%
Tenth step	140	9	2	34	13	71	3	5
	1.1%	0.4%	0.2%	1.7%	1.1%	2.0%	0.2%	0.5%
No answer	191	154	0	34	10	0	0	0
	1.5%	6.7%	0.0%	1.7%	0.8%	0.0%	0.0%	0.0%
Don't know	268	83	2	36	13	95	0	32
	2.1%	3.6%	0.2%	1.8%	1.1%	2.7%	0.0%	3.2%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	4.47	4.36	5	3.32	4.67	5.21	4.4	3.56
Std. Dev	2.23	1.84	1.88	2.44	1.83	2.28	2.06	2.15
Base mean	12.305	2.062	1.2	1.93	1.186	3.436	1.523	968

Table 21: Summary Statistics: Nature of Tasks

	Total	**China**	**Ecuador**	**Mexico**	**Peru**	**S. Africa**	**Egypt**	**Yemen**
Manual tasks (1)	1,979	127	182	836	328	237	123	148
	15.5%	5.5%	15.1%	41.8%	27.1%	6.7%	8.1%	14.8%
2	689	131	99	120	115	71	76	73
	5.4%	5.7%	8.2%	6.0%	9.5%	2.0%	5.0%	7.3%
3	740	205	79	88	91	134	111	34
	5.8%	8.9%	6.6%	4.4%	7.5%	3.8%	7.3%	3.4%
4	626	166	55	56	83	177	70	14
	4.9%	7.2%	4.6%	2.8%	6.9%	5.0%	4.6%	1.4%
5	1,149	186	89	200	139	417	81	35
	9.0%	8.1%	7.4%	10.0%	11.5%	11.8%	5.3%	3.5%
6	894	173	69	42	71	466	58	20
	7.0%	7.5%	5.7%	2.1%	5.9%	13.2%	3.8%	2.0%
7	779	152	34	46	65	395	72	21
	6.1%	6.6%	2.8%	2.3%	5.4%	11.2%	4.7%	2.1%
8	868	173	36	88	46	395	96	41
	6.8%	7.5%	3.0%	4.4%	3.8%	11.2%	6.3%	4.1%
9	421	76	37	50	44	162	26	25
	3.3%	3.3%	3.1%	2.5%	3.6%	4.6%	1.7%	2.5%
Non-manual (10)	689	62	55	170	121	205	50	23
	5.4%	2.7%	4.6%	8.5%	10.0%	5.8%	3.3%	2.3%
Have never worked	2,911	798	466	300	27	0	762	551
	22.8%	34.7%	38.8%	15.0%	2.2%	0.0%	50.0%	55.1%
No answer	77	18	0	4	61	0	0	0
	0.6%	0.8%	0.0%	0.2%	5.0%	0.0%	0.0%	0.0%
Don't know	945	37	2	4	18	872	0	15
	7.4%	1.6%	0.2%	0.2%	1.5%	24.7%	0.0%	1.5%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	4.79	5.09	4.23	3.53	4.27	5.94	4.78	3.86
Std.Dev	2.95	2.53	2.91	3.19	3.1	2.46	2.81	3.06
Base mean	8.832	1.446	734	1.693	1.105	2.66	761	434

Within-Country Regression Results[35,36,37]

Table 22: Estimated Results: Composite Variables Within-Country

Dependent Variable: Informality		**Ecuador**	**Egypt**	**Mexico**	**Peru**	**China**	**S.Africa**
Support for gov't involvment	marg. eff.	0.032	0.007	0.019**	0.016	0.005	0.010
	p value	(0.067)	(0.646)	(0.070)	(0.144)	(0.700)	(0.216)
Confidence in market institutions	marg. eff.	−0.025	−0.036**	−0.034**	0.002	0.045***	−0.007
	p value	(0.193)	(0.021)	(0.004)	(0.841)	(0.007)	(0.464)
Confidence in gov't institutions	marg. eff.	0.095	0.464***	0.020	0.028	-0.002	0.026
	p value	(0.109)	(0.000)	(0.585)	(0.589)	(0.972)	(0.441)
Political participation	marg. eff.	-0.011	−0.066***	−0.017*	0.022**	0.023*	−0.021***
	p value	(0.526)	(0.000)	(0.062)	(0.032)	(0.095)	(0.007)
Individual norms	marg. eff.	−0.061***	-0.029	-0.029	-0.016	-0.011	−0.024**
	p value	(0.004)	(0.110)	(0.024)	(0.277)	(0.521)	(0.021)
Education (attended university)	marg. eff.	−0.120**	0.015	−0.156***	−0.122***	−0.117**	−0.126***
	p value	(0.017)	(0.761)	(0.000)	(0.001)	(0.018)	(0.001)
Employment status (full-time)	marg. eff.	−0.503***	−0.702***	−0.216***	−0.243***	0.010	−0.536***
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.795)	(0.000)
Nature of task (non-manual)	marg. eff.	−0.188***		−0.148***	-0.051	−0.350***	0.239
	p value	(0.010)		(0.000)	(0.267)	(0.000)	(0.000)
Scales of income (high-income)	marg. eff.	0.389***	0.544***	−0.175***	−0.134**	0.038	0.025
	p value	(0.000)	(0.000)	(0.001)	(0.026)	(0.675)	(0.565)
Observations		719	1460	1528	819	599	1996
$Prob > \chi^2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Level of Informality by Other Sources

Table 23: Informal Sector Size Comparison

	Elgin and Oztunali (2012)	**Schneider *et al* (2010)**	**WVS - Wave 6**
S. Africa	23.3	30.0	54
Yemen	26.5	28.6	55.1
China	10.4	14.1	19.8
Ecuador	28.7	36.5	32.3
Egypt	30.8	37.4	49.9
Mexico	28.4	31.7	29.8
Peru	49.7	63.4	30.8

[35] In all the regressions, we use social class, marital status, middle age, sex and scales of income as control variables. However, we report the coefficients only for the variables of interest and exclude the control variables in the tables for the purpose space saving. They are kindly provided upon request.

[36] For robustness purposes, we have also estimated results of within-country regressions for all the variables in each category. Obtained results are more or less in line with the findings obtained using the entire data set. However, we do not report them here due to limited space. These findings are available from the corresponding author upon request.

[37] "Nature of task" is not asked in Egypt.

Principal Component Analysis (PCA)

Table 24: PCA: Ideology

Number of Observations	821				
Number of Components	4				
Trace	4				
ρ	1				
Component	Eigenvalue	Difference	Proportion	Cumulative	
Component 1	1.4457	0.2500	0.3614	0.3614	
Component 2	1.1956	0.3679	0.2989	0.6603	
Component 3	0.8278	0.2967	0.2069	0.8672	
Component 4	0.5310	.	0.1328	1	
Principal Component Eigenvectors					
Variable	Component 1	Component 2	Component 3	Component 4	Unexplained
Preference for Egalitarian Income	0.4533	-0.6254	0.2667	0.5764	0
Against Private Ownership	-0.5681	0.2528	0.6653	0.4132	0
Belief in Government Delivery	0.3901	0.6806	-0.2717	0.5574	0
Competition is Bad	0.5654	0.2858	0.6422	-0.4316	0

Table 25: PCA: Market Institutions

Number of Observations	427			
Number of Components	2			
Trace	2			
ρ	1			
Component	Eigenvalue	Difference	Proportion	Cumulative
Component 1	1.4107	0.8214	0.7053	0.7053
Component 2	0.5893	.	0.2947	1
Principal Component Eigenvectors				
Variable	Component 1	Component 2	Unexplained	
Confidence in Unions	0.7071	0.7071	0	
Confidence in Major Companies	0.7071	-0.7071	0	

Table 26: PCA: Government Institutions

Number of Observations	832			
Number of Components	2			
Trace	2			
ρ	1			
Component	Eigenvalue	Difference	Proportion	Cumulative
Component 1	1.3843	0.7687	0.6922	0.6922
Component 2	0.6157	.	0.3078	1
Principal Component Eigenvectors				
Variable	Component 1	Component 2	Unexplained	
Confidence in Government	0.7071	0.7071	0	
Confidence in Civil Services	0.7071	-0.7071	0	

Table 27: PCA: Participation

Number of Observations	619					
Number of Components	5					
Trace	5					
ρ	1					
Component	Eigenvalue	Difference	Proportion	Cumulative		
Component 1	1.892	0.3922	0.3784	0.3784		
Component 2	1.4998	0.6637	0.3000	0.6784		
Component 3	0.8361	0.1912	0.1672	0.8456		
Component 4	0.6449	0.5178	0.129	0.9746		
Component 5	0.1271	.	0.0254	1		
Principal Component Eigenvectors						
Variable	Component 1	Component 2	Component 3	Component 4	Component 5	Unexplained
Vote in Local Elections	0.6908	0.1476	-0.0257	0.0215	0.7070	0
Vote in National	0.6889	0.1598	0.0123	0.0208	-0.7066	0
Signing a Petition	-0.1572	0.5932	-0.3502	0.7077	-0.0044	0
Engaging in Demonstration	-0.1169	0.6072	-0.3454	-0.7059	-0.0036	0
Active Political Membership	-0.099	0.4818	0.8702	0.0049	0.0277	0

Table 28: PCA: Values

Number of Observations	842			
Number of Components	2			
Trace	2			
ρ	1			
Component	Eigenvalue	Difference	Proportion	Cumulative
Component 1	1.2859	0.5718	0.6429	0.6429
Component 2	0.7141	.	0.3571	1
Principal Component Eigenvectors				
Variable	Component 1	Component 2	Unexplained	
Practice religion	0.7071	0.7071	0	
Tax Morale	0.7071	-0.7071	0	