EMPIRICAL ESSAYS ON THE INFORMAL ECONOMY

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EMPIRICAL ESSAYS ON THE INFORMAL ECONOMY

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DECLARATION OF ORIGINALITY

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ABSTRACT

Empirical Essays on the Informal Economy

In this masters thesis, I empirically study the informal sector in two separate essays, both of which have implications for policy making and make original contributions to the understanding of informality around the world. In the first essay, I investigate the relationship between energy consumption and the size of the informal economy. Relying on panel data regression models, my estimation results show that at the aggregate level, energy intensity is inversely related to the size of the informal sector, providing actual empirical evidence on the presence of high labor and low capital intensity in the informal economy. Furthermore, I also find evidence for the presence of non-linearity and asymmetry in this relationship.

In the second essay, I investigate the relationship between the informal sector employment, and micro-level socio-demographic characteristics, political attitudes and individual norms. Using self-reported data, I show that socio-demographic characteristics are strong predictors of the informal sector employment. Moreover, individuals preferences for an economically strong state, as much as their confidence in political institutions are significantly and positively correlated with the informal sector employment, whereas variables associated with confidence in market institutions are negatively correlated with the informal sector employment. I also show that individuals who participate in political processes have a lower probability of working in the informal sector. Finally, I show that individual norms, such as religiosity and tax morale are negatively correlated with the informal sector employment, as well.

ÖZET

Kayıtdışı Ekonomi Üzerine Empirik Makaleler

Bu yüksek lisans tezinde, her ikisi de politika oluşturma açısından sonuçlar içeren ve kayıtdışı ekonomi literatürüne orijinal katkılar yapan iki empirik makale ile kayıtdışı ekonomiyi inceliyorum. İlk makalede enerji tüketimi ile kayıtdışı ekonominin ilikisini araştırıyorum. Panel data regresyon modellerine dayanaran tahmin sonuçlarım, makro düzeyde enerji yoğunluğu ile kayıtdışı ekonominin boyutları arasında negative bir ilişki gösteriyor. Bu sonuç kayıtdışı ekonomide yüksek iş gücü yoğunluğu ve düşük sermaye yoğunluğuna dair empirik kanıt niteliğindedir. Ayrıca, bu ilişkinin doğrusal olmadığına ve asimetrik olduğuna dair de kanıtlar buluyorum.

İkinci makalede, kayıtdışı ekonomi istihdamı ile mikro düzeydeki sosyo-demografik özellikler, siyasi davranış biçimleri ve kişisel değerler arasındaki iliskiyi inceliyorum. Kişilerin kendi verdikleri bilgilere dayanarak, sosyo-demografik özelliklerin kayıtdışı ekonomi istihdamı ile ilgili önemli birer tahminci olduklarını gösteriyorum. Kişilerin ekonomik olarak güçlü bir devlet tercihleri ve siyasi kurumlara olan güvenleri kayıtdışı istihdam ile anlamlı ve positif bir ilişki gösterirken, piyasa kurumlarına olan güvenle ilgili olan değişkenler kayıtdışı ekonomideki istihdam ile anlamlı ve negatif bir ilişki gösteriyor. Ayrıca, siyasi süreçlere katılan bireylerin kayıtdışı ekonomide istihdam edilmiş olma ihtimallerinin daha düşük olduğunu gösteriyorum. Son olarak, dindarlık ve vergi ahlakı gibi kişisel değerlerin kayıtdışı ekonomi istihdamı ile negatif ilişkili olduğu gösteriyorum.

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CHAPTER 1

ENERGY CONSUMPTION AND THE SIZE OF THE INFORMAL ECONOMY

1.1 Introduction

As it is defined by Hart (2008), informal (or shadow) economy is the collection of a set of economic activities that take place outside the framework of public and private sector bureaucratic establishments. Another definition by Ihrig and Moe (2004) defines it as a sector that produces legally produced goods and services without having to comply with government regulations.[1]

Informal economy is often characterized as a highly labor-intensive sector, rather than a capital-intensive one, without access to the technological frontier in production (Matthews, 1983). One explanation for this phenomenon is that the informal sector operates on a small scale in order to avoid government scrutiny. Accordingly, due to limitations on economies of scale, the informal sector produces with lower capital and higher labor intensity. Another explanation for the higher labor-intensity is due to the lower operational cost of labor in the imperfectly monitored informal sector. For instance, labor is cheaper in the informal sector than the formal sector since informal employers do not have to pay the minimum wage, severance payments or insurance premiums for their employees to the extent the formal employers do.

Since energy consumption is highly induced by capital intensity in production, considering the lower capital intensity of the informal sector, *ceteris paribus*, we expect that countries with larger informal sectors have lower levels of energy consumption. In this paper, we provide actual empirical evidence supporting this

[1] See Frey and Pommerehne (1984), Loayza (1996), Johnson, Kaufmann and Shleifer (1997), Thomas (1999), Fleming, Roman and Farrel (2000), Schneider and Enste (2000, 2002), Schneider (2005) and Elgin and Oztunali (2012) for other definitions.

hypothesis that there is lower energy consumption per unit of output, in countries where the informal sector has a higher share in total production.

There is a vast empirical literature on energy consumption and its interaction with different major economic variables and indicators, e.g. with growth (Kraft & Kraft, 1978; Mahadevan & Asafu-Adjaye, 2007; Lee, 2008; Karanfil, 2008; Soytaş & Sarı, 2009; Payne, 2010), GDP and income (Yu & Choi, 1985; Eden & Jin, 1992; Oh & Lee, 1999; Lee, 2005; Lee, 2006; Masih & Masih, 1996). Among these papers, Karanfil (2008) deserves a special attention, as it is directly related to our paper. This paper argues that there is no significant correlation or causality between growth and energy consumption in Turkey when the presence of the informal sector is taken into account. Karanfil (2008) further argues that this result is in strong contrast with previous studies that have obtained a positive correlation between growth and energy consumption and might be due to a negative relationship between informality and energy consumption. Moreover, in two other recent related papers Elgin and Oztunali (2014a, 2014b) show that, first for a cross-country panel and then for the Turkish economy, that the relationship between several pollution indicators and the size of the informal sector is non-linear. In the former paper, they use cross-country panel data from 152 countries over the period from 1999 to 2009 and show that there is an inverse-U relationship between pollution indicators and informal sector size. In the latter paper, they obtain the same relationship using annual time-series data from the Turkish economy. As the pollution indicators are highly correlated with energy consumption, the findings of these two papers also shed light on our paper. Nevertheless, to the best of our knowledge, our paper is unique in the literature in investigating the relationship between energy consumption and informal sector size. We utilize an annual cross-country panel data set covering 159 countries over 33

years from 1980 to 2012 and we examine the relationship between the energy intensity, defined as total energy consumption as a percentage of GDP, and the size of the informal sector, similarly denoted as a percentage of GDP.

Our main findings in our empirical analysis are threefold: First, there is a significant negative relationship between energy consumption and the size of informal sector. While this negative relationship is robust for oil-importing, emerging, OECD, and G20 countries, it is not significant for G7 countries which tend to have smaller informal sectors. Second, the relationship between the size of the informal sector and energy consumption exhibits some evidence towards the presence of non-linearity. Specifically, countries with very high (31 countries; above 40%) and very low (35 countries; below 20%) levels of informality have a stronger relationship with energy consumption, whereas this relationship is relatively smaller in countries with medium levels of informality (78 countries; between 20% and 40%). Finally, we also show that the relationship between energy consumption and the size of the informal sector is asymmetric, specifically for G20 countries as well as countries that have informal sector size less than 20% of GDP. That is, for these countries an increase in the size of informality as a percentage of GDP leads to less of a change in energy consumption compared to a decrease.

The rest of the paper is organized as follows: In the next section, we introduce the data we are utilizing and the econometric methodology used for the estimations. In the third section, we provide results from our estimations in three subsections, namely linear estimations, non-linear estimations and analysis of asymmetry. Then, in section four, we provide a discussion of our results as well as present several policy implications. Finally, in the last section we conclude.

1.2 Data and methodology

1.2.1 Data

Although the literature on the informal sector and its interaction with economic variables is ever growing, one of the major challenges in documenting rigorous and consistent empirical results is due to the difficulties in the measurement of the actual size of informality. Majority of the earlier studies in the literature try to infer the size of informality by relying on country or region-specific design, thereby lacking consistency and comparability in their construction. Schneider, Buehn and Montenegro (2010), and Schneider (2005) being the exceptions, employ the Multiple Indicators Multiple Causes (MIMIC) methodology to predict the size of informality, yet offer measures only for a limited window of time. Elgin and Oztunali (2012) introduce a model-based approach to the literature by inferring the size of informality from a two-sector dynamic general equilibrium model. By doing so, they offer a new panel data set on the size of the informal economy for a large set of countries. Contrary to the earlier literature, they build on microeconomic foundations in their calibration technique, and do not rely on *ad-hoc* econometric specifications in measuring the size of informality, hence succeed in limiting hazards in measurement error.[2]

In this study, we utilize the annual cross-country informal sector estimates (measured as a share of the formal economy) by Elgin and Oztunali (2012) for a panel of 159 countries between the years 1980 and 2012. To proxy for measuring energy

[2]To the best of our knowledge, the data set by Elgin and Oztunali (2012) offers the longest-horizon informality estimates in the literature, thereby providing us with the opportunity to capture the best time-series and cross-sectional variation.

intensity, we use data provided by the U.S. Energy Information Administration (EIA) on annual energy consumption in million kilowatt hours as a percentage of GDP for the same 159 countries and sample period. Descriptive statistics of the variables of interest are displayed in Table 1.

Table 1. Descriptive Statistics for the Full Sample.

Variables	Obs.	Mean	Std.Dev.	Min	Max
Informal Sector Size (IS)[3]	5001	0.3356	0.1375	0.0797	1.1338
Energy Intensity (EI)[4]	4679	0.0144	0.0162	0.0000	0.1906

As displayed in Table 1, the size of the informal sector is approximately one-third of real output in our data set, and its variation is considerable across countries: the standard deviation is more than one third of the mean value. While developed countries tend to have smaller sizes of the informal sector (as low as 7.97% for Switzerland in 2012), developing countries are observed to have very large informal sector sizes: in some instances, sizes even greater than 100% of their formal output. Energy intensity variable suggests approximately 14,400 thousand kilowatts of energy per unit of output is consumed in our panel data set, and the standard deviation of energy consumption per unit of output is above 100% of its mean value.

In order to investigate the relationship between energy intensity and the size of the informal sector in depth, we make use of 5 different mutually-inclusive categories, namely *oil-importing economies, emerging economies, G20, G27, and OECD*. By doing so, we factor in differences due to different governmental regulations,

[3]As discussed, informal sector size is measured as a share of the formal sector size, which is why the IS size reaches levels higher than 100% in some cases, such as in Equatorial Guinea between 1982 and 1991.

[4]We generate the energy intensity index as energy consumption in million kilowatts divided by total real GDP. The minimum value of zero is for Namibia in 1987, 1988 and 1989 due to is negligibly small energy consumption in these years.

institutions, revenue-raising activities. Further, category-specific findings enhance the robustness of our estimations, along with grasping heterogeneity among country groups in terms of the energy intensity and informal sector size relationship.[5] Descriptive statistics of variables of interest for different country groups are illustrated in Table 2.

Table 2. Descriptive Statistics: Country Groups.

Country Groups[6]	Variable	Obs.	Mean	Std.Dev.	Min	Max
Oil-Importing Economies	IS	594	0.2155	0.1118	0.0813	0.7196
(18 countries)	EI	580	0.0114	0.0098	0.0035	0.0799
Emerging Economies	IS	627	0.3103	0.1137	0.1036	0.7196
(19 countries)	EI	606	0.0171	0.0098	0.0044	0.0799
G20	IS	611	0.2226	0.0903	0.0813	0.4733
(19 countries)	EI	607	0.0135	0.011	0.0035	0.0799
G7	IS	231	0.1596	0.0600	0.0813	0.3253
(7 countries)	EI	231	0.0072	0.0033	0.0035	0.0172
OECD	IS	1085	0.1991	0.0745	0.0797	0.4733
(34 countries)	EI	1058	0.0077	0.0032	0.0028	0.0231

In addition to the aforementioned groups, we also categorize countries in five sub-groups according to their average informal sector sizes. This analysis allows us address and condition possible heterogeneities in the relationship of interest *vis-à-vis* the informal sector size. Descriptive statistics for different country groups categorized with respect to their average informal sector sizes is provided in Table 3.

[5]In Section 3, we show that the significant negative relationship between the size of the informal sector and energy intensity is common to all country groups, even though with different elasticities, whereas the non-linearity and asymmetric nature of this relationship may not apply to all country groups.

[6]Country groups are listed in the detail in the appendix A.

Table 3. Descriptive Statistics: Country Groups According to the IS Size.

Country Groups	Variable	Obs.	Mean	Std.Dev.	Min	Max
$IS > 0.5$	IS	469	0.5831	0.1194	0.2525	1.1338
(15 countries)	EI	412	0.0149	0.0185	0.0004	0.1460
0.4-0.5	IS	946	0.4472	0.0489	0.3033	0.5746
(31 countries)	EI	908	0.0138	0.0163	0.0018	0.1075
0.3-0.4	IS	1767	0.3510	0.0456	0.2096	0.5160
(56 countries)	EI	1625	0.0164	0.0201	0.0011	0.1906
0.2-0.3	IS	701	0.2636	0.0337	0.1740	0.3919
(22 countries)	EI	663	0.0114	0.0064	0.0000	0.0334
< 0.2	IS	1118	0.1581	0.0351	0.0797	0.2567
(35 countries)	EI	1071	0.0133	0.0120	0.0014	0.0799

Table 3 demonstrates that both energy intensity and the informal sector size varies considerably in first and second moments among sub-groups once countries once they are conditioned on the informal sector size.

By employing the described data set, we next turn to econometrical methods to explore the nature of the informal sector and energy intensity relationship.

1.2.2 Econometric specifications

In our econometric specifications, we rely on panel-data techniques put forward by Baltagi and Wu (1999). Although our data set is quite balanced in terms of the country-year observations, there are still some absent data points in our data set. Similar to Baltagi and Wu (1999), we address this issue by employing unequally-spaced cross-sectional time-series data regression models. Further, when the disturbance term is first-order autoregressive, AR(1), the proposed method is applicable, and we apply this suitable technique in our estimations, as we detect first-order autoregressive persistence in the error terms by the use of the Wooldridge test.

We start our econometric hypothesis testing for the presence of a negative relationship between the size of the informal sector and energy intensity by employing a log-linear ordinary least squares (OLS) estimation. The baseline estimation can be described as follows:

$$log(EI_{i,t}) = \alpha_i + \beta_0 + \beta_1 log(IS_{i,t-1}) + \beta_2 log(EI_{i,t-1}) + \beta_3 t + \epsilon_{i,t} \tag{1}$$

where $EI_{i,t}$ stands for the energy intensity for the country i for year t. Similarly, $IS_{i,t-1}$ stands for the size of the informal sector for country i for the year $t-1$. We also control for the time-trend through to account for the global evolution of the size of the informal sector over time. In our estimations, we also include a country-fixed dummy variables to capture region-specific peculiarities.[7]

The Wooldridge test rejects the absence of autocorrelation for the error term, $\epsilon_{i,t}$, accordingly we specify the error term to follow the below stochastic process:

$$\epsilon_{i,t} = \rho + \epsilon_{i,t-1} + z_{i,t} \tag{2}$$

where $|\rho| < 1$ and $z_{i,t}$ are independent and identically distributed (i.i.d.) with mean 0 and variance σ_z^2.

We use lagged values of the size of the informal sector so that the timing of the events could be interpreted as a causation between informality and energy intensity,

[7]While we base our discussion through our findings from the log-linear specification, our findings from estimations in levels provide similar results. For brevity, we refrain from reporting these results, and they are available upon request.

i.e. the size of informality predicts energy intensity due to the timing of events, but not the other way around.[8]

While taking first-order difference induces loss of information, in order to check for the robustness of our findings, we also make use of regressions from first-order log differences. The first-order differences of the variables of interest can be interpreted as their annual growth rates in percentage terms.[9] The model with the first-order logarithmic differences can be expressed as follows:

$$\Delta log(EI_{i,t}) = \alpha_i + \beta_0 + \beta_1 \Delta log(IS_{i,t-1}) + \beta_2 \Delta log(EI_{i,t-1}) + \beta_3 t + \epsilon_{i,t} \quad (3)$$

We use both level and first-difference specifications to investigate the relationship in different country groups, as well. First, we analyze the relationship within different country groups, such as OECD, G20, G7, emerging economy or oil-importing countries; then, we repeat the same exercise also for countries categorized in terms of their average informal sector sizes. This approach provides us with information about the robustness of the relationship in countries with different characteristics, especially in terms of rule of law, regulations and resources. Further, it helps us show if there are differences across countries in terms of power and significance of the relationship.

Our findings from both level and first-difference regressions suggest different coefficients for countries with different average sizes of informality over the years.

[8]When we rely on contemporaneous timing for the informal sector variable, we derive similar results. These findings are available from the corresponding author upon request.

[9]Taking first differences also addresses issues considering the stationarity problems of I(1) series. Our results from the first-differences of logarithmic and level regressions provide statistically similar findings.

Accordingly, we consider the possibility of a non-linear relationship between the variables of our interest. For this goal, we run the following panel-data regression:

$$EI_{i,t} = \alpha_i + \beta_0 + \beta_1 IS_{i,t-1} + \beta_2 IS^2_{i,t-1} + \beta_3 EI_{i,t-1} + \beta_4 t + \epsilon_{i,t} \tag{4}$$

In this estimation, whenever β_2 is significantly different from zero, the relationship to our interest suggests non-linearities, and depending on the magnitudes of the β_1 and the β_2 coefficients, convexities or concavities could arise.

We next test if there is an asymmetry in the relationship between the size of the informal economy and energy intensity. By distinguishing a decrease versus an increase in the size of informal sector, we intend to detect possible differences between the reactions of energy intensity to the change in the size of the informal economy in response to a decrease versus an increase of equal magnitude. For this goal, we estimate the following regression:

$$log(EI_{i,t}) = \alpha_i + \beta_0 + \beta_1 log(IS_{i,t-1}) + \beta_2 log(IS_{i,t-1}) \times D_{t-1} + \beta_3 log(EI_{i,t-1}) + \beta_4 t + \epsilon_{i,t} \tag{5}$$

where D_{t-1} refers to a dummy variable taking the value of 1 when the size of the informal sector increases in period $t-1$, and zero otherwise.

Using this specification, we can detect if the linear relationship between the size of the informal sector and energy intensity displays asymmetry with respect to the direction of change in the size of the informal sector by focusing on the β_2 coefficient.

1.3 Results

1.3.1 Estimation results with linear specification

In this section, we start by reporting our results from the benchmark linear specification. Table 4 displays the results from the level regressions employing the informal size and energy intensity variables, both expressed in their natural logarithms. In line with our expectations, we detect a negative and statistically significant relationship between the informal sector size and the energy intensity variables. The coefficient before the lagged informal sector size variable is significant for the whole data-set, as well as for all country sub-groups, except for the G7, which is a group of industrialized democracies (France, Germany, Italy, the United Kingdom, Japan, the United States, and Canada) with limited informal sector size and variability in informality.

Table 4. Level Analysis: Country Groups.

	All Sample	Oil-Importing	Emerging	G 20	G 7	OECD
IS_{t-1}	-0.1152^{***}	-0.0660^{**}	-0.1341^{***}	-0.0503^{*}	-0.1364	-0.0778^{**}
	(0.0247)	(0.0264)	(0.0265)	(0.0294)	(0.0864)	(0.0327)
EI_{t-1}	0.8193^{***}	0.9513^{***}	0.9579^{***}	0.9141^{***}	0.9586^{***}	0.9177^{***}
	(0.0082)	(0.0108)	(0.0137)	(0.0147)	(0.0213)	(0.0105)
constant	-0.8432^{***}	-0.3276^{***}	-0.2825^{***}	-0.3549^{***}	-0.4527^{***}	-0.5016^{***}
	(0.0441)	(0.0605)	(0.0624)	(0.0623)	(0.1599)	(0.0755)
R^2	0.9635	0.9793	0.9809	0.9941	0.9827	0.9799
Observations	4332	544	568	563	217	990
Countries	159	18	19	19	7	34
F-test	3.59	4.92	4.36	3.53	2.77	4.49

Noticeably, there is considerable variation in the immediate response of energy intensity to a change in the size of the informal sector. For instance, while a 1% increase in the size of the informal sector generates a 13% immediate decrease in

energy intensity in the emerging countries on average, the correspondent decrease for the G20 country group is as low as 5%.

In Table 5, we report the results of the same econometric specification for country groups categorized in terms of their average informal sector sizes. The relationship is robust to different average informal sector sizes except for with limited country sizes, e.g. the country group with informal sector size greater than 50% of formal output, in which there are only 15 countries and issues considering non-linearity of the relationship is possible, which is addressed in the following estimations.

Table 5. Level Analysis: Countries with Different Average Informal Sector Sizes.

	All Sample	> 0.5	$0.4 - 0.5$	$0.3 - 0.4$	$0.2 - 0.3$	< 0.2
IS_{t-1}	-0.1152^{***}	-0.0562	-0.1479^{**}	-0.1605^{***}	-0.0545	-0.1165^{***}
	(0.0247)	(0.1241)	(0.0588)	(0.044)	(0.0613)	(0.0349)
EI_{t-1}	0.8193^{***}	0.4688^{***}	0.8349^{***}	0.8259^{***}	0.8109^{***}	0.9245^{***}
	(0.0082)	(0.046)	(0.0191)	(0.0127)	(0.0231)	(0.0122)
constant	-0.8432^{***}	-1.4707^{***}	-0.8547^{***}	-0.9275^{***}	-0.918^{***}	-0.494^{***}
	(0.0441)	(0.1655)	(0.1007)	(0.0676)	(0.1075)	(0.0765)
R^2	0.9635	0.9383	0.9734	0.9662	0.9836	0.9915
Observations	4332	380	841	1506	610	995
Countries	159	15	31	56	22	35
F test	3.59	8.42	2.63	3.76	3.47	3.70

While high R^2 values indicate possible problems in stationarity of the variables in use, our results from the first-difference regressions, which we illustrate in Table 6 and Table 7 provide similar qualitative findings.

In Table 6, we report the results from our linear estimations with first-order differences employing all data-set and different country groups. The negative relationship between the size of the informality and energy intensity is significant and robust for the first-difference specification, except for the emerging economies, in

which there is a high degree of heterogeneity in production structures and rule of law, thereby boosting the standard errors, and pushing the IS_{t-1} to the insignificant range. There is still considerable amount of heterogeneity across country groups and first-order estimations yield reasonable R^2 values, alleviating concerns on the unit-root problem in the variables of interest.

Table 6. Log Differences: Country Groups.

	All Sample	oil-importing	emerging	G 20	G 7	OECD
ΔIS_{t-1}	-0.4777^{**}	-0.5865^{**}	-0.4066	-0.3111^{**}	-1.017^{**}	-0.8043^{**}
	(0.1696)	(0.2551)	(0.2630)	(0.0403)	(0.4206)	(0.2097)
ΔEI_{t-1}	-0.1636^{**}	-0.2331^{**}	-0.2317^{**}	-0.3111^{**}	-0.1795^{**}	-0.2961^{**}
	(0.0151)	(0.0433)	(0.0415)	(0.0403)	(0.0678)	(0.0302)
constant	0.0094^{*}	-0.0123^{**}	0.0225^{**}	-0.0055	-0.0136	-0.0084^{**}
	(0.0048)	(0.0038)	(0.0052)	(0.0039)	(0.0042)	(0.0029)
R^2	0.2970	0.4556	0.4621	0.3437	0.3593	0.5004
Observations	4173	526	549	544	210	956
Countries	159	18	19	19	7	34
F test	1.11	4.93	2.94	3.60	3.25	2.66

In Table 7, we condition countries with respect to their average informal sector sizes as we do in Table 5, and repeat our estimations by utilizing the logarithmic first differences instead of using logarithmic levels. The negative relationship is significant for 3 groups of countries which have average informal sector sizes as a share of formal GDP between 30% & 40%, 20% & 30% and lower than 20%. Negative relationship does not show up to be significant for countries with informal sector size higher than 50% and between 40% & 50%, again possibly due to considerable heterogeneity in these developing economies with substantial variations over time, thereby magnifying standard errors. Overall, these estimations promote the conclusion that the negative relationship is robust for country groups with different average informal sector sizes below 40% as a share of formal GDP.

Table 7. Log Differences: Countries with Different Average Informal Sector Sizes.

	All Sample	> 0.5	$0.4 - 0.5$	$0.3 - 0.4$	$0.2 - 0.3$	< 0.2
ΔIS_{t-1}	-0.4777^{**}	-1.2935	-0.2794	-0.1622^{*}	0.5688^{*}	-1.0501^{**}
	(0.1696)	(0.7989)	(0.3687)	(0.3249)	(0.3238)	(0.2374)
ΔEI_{t-1}	-0.1636^{**}	-0.4183^{**}	-0.3008^{**}	-0.0921^{**}	-0.218^{**}	-0.2805^{**}
	(0.0151)	(0.0474)	(0.0320)	(0.0262)	(0.0402)	(0.0311)
constant	0.0094^{*}	-0.0145	-0.0082^{*}	-0.0033	-0.0018	-0.0205^{**}
	(0.0048)	(0.0153)	(0.0045)	(0.0039)	(0.0032)	(0.0025)
R^2	0.2970	0.4011	0.5911	0.6972	0.5480	0.3506
Observations	4173	365	810	1450	588	960
Countries	159	15	31	56	22	35
F test	1.11	0.95	0.91	0.87	1.54	2.74

Next, in order to check potential non-linearities, we turn to testing for quadratic implications of informality on the convexity and/or concavity on the relationship of our interest.

1.3.2 Non-linear estimation

In Table 8 and Table 9, we report our results from the non-linear specifications described in Equation (4). Estimated coefficients are significant only over all countries in the data; but, insignificant for sub-groups of countries. We interpret this findings as that sufficient number of observations, and accordingly variation is a necessary condition to detect a statistically significant non-linearity in the relationship between energy intensity and informality.

Table 8. Non-linear Estimation: Country Groups.

	All Sample	oil-importing	emerging	G 20	G 7	OECD
IS_{t-1}	-0.0154^{***}	0.0052	-0.0064	-0.0105	$-.0027$	-0.0022
	(0.0033)	(0.0038)	(0.004)	(0.0081)	(0.0098)	(0.0044)
IS^2_{t-1}	0.0099^{***}	-0.0083^{**}	0.0011	0.0085	-0.0007	0.0010
	(0.0029)	(0.0037)	(0.0042)	(0.0118)	(0.0139)	(0.0062)
EI_{t-1}	0.8931^{***}	0.9204^{***}	0.9273^{***}	0.9353^{***}	0.9499^{***}	0.9223^{***}
	(0.0151)	(0.0073)	(0.0091)	(0.0097)	(0.0241)	(0.0096)
constant	0.0056^{***}	0.00016	0.0035^{***}	0.0029^{***}	0.0008	0.001
	(0.0007)	(0.0006)	(0.0008)	(0.0011)	(0.0009)	(0.0006)
R^2	0.9729	0.9953	0.9866	0.9911	0.9937	0.9843
Observations	4335	544	568	563	217	990
Countries	159	18	19	19	7	34
F test	2.15	6.69	8.93	4.61	1.26	4.31

Table 9. Non-linear Estimation: Countries with Different Informal Sector Sizes.

	All Sample	> 0.5	$0.4 - 0.5$	$0.3 - 0.4$	$0.2 - 0.3$	< 0.2
IS_{t-1}	-0.0154^{***}	-0.0019	-0.108	0.0089	0.0194	-0.0497^{**}
	(0.0033)	(0.0113)	(0.1146)	(0.0256)	(0.0193)	(0.0243)
IS^2_{t-1}	0.0099^{***}	0.001	0.0791	-0.0242	-0.0472	0.0875
	(0.0029)	(0.0081)	(0.1299)	(0.0354)	(0.0346)	(0.0655)
EI_{t-1}	0.8931^{***}	0.8949^{***}	-0.1928^{***}	0.9072^{***}	0.8628^{***}	0.9289^{***}
	(0.0151)	(0.0173)	(0.0274)	(0.011)	(0.0197)	(0.01006)
constant	0.0056^{***}	0.002	0.0497^{***}	0.0016	0.00009	0.0069^{***}
	(0.0007)	(0.0033)	(0.003)	(0.0042)	(0.0025)	(0.002)
R^2	0.9729	0.9758	0.7345	0.9793	0.9792	0.9815
Observations	4335	380	841	1506	613	995
Countries	159	15	31	56	22	35
F test	2.15	1.55	9.41	1.52	2.60	2.82

When we focus on the estimation results from the whole sample, the significant coefficients of the informal sector size, β_2, and square of the informal sector size, β_3 are negative and positive, respectively. This finding indicates a U-shaped non-linear relationship between informality and energy intensity over all set of countries. For moderately low and very high levels of informal sector size, we detect high levels of

energy intensity, whereas medium levels of informality corresponds to lower levels of energy intensity.

Based on our estimated coefficients, we quantify the levels of energy intensity over different levels of informal sector size and display the non-linear relationship in Figure 1, which we graph by the use of average values of variables of interest. Figure 1 suggests that energy intensity decreases with informal sector size with a decreasing rate and starts to increase with an increasing rate beyond a large threshold informal sector size of approximately 80%. As the size of the informal economy reaches 80%, further increases in the informal sector size actually amplifies energy intensity.

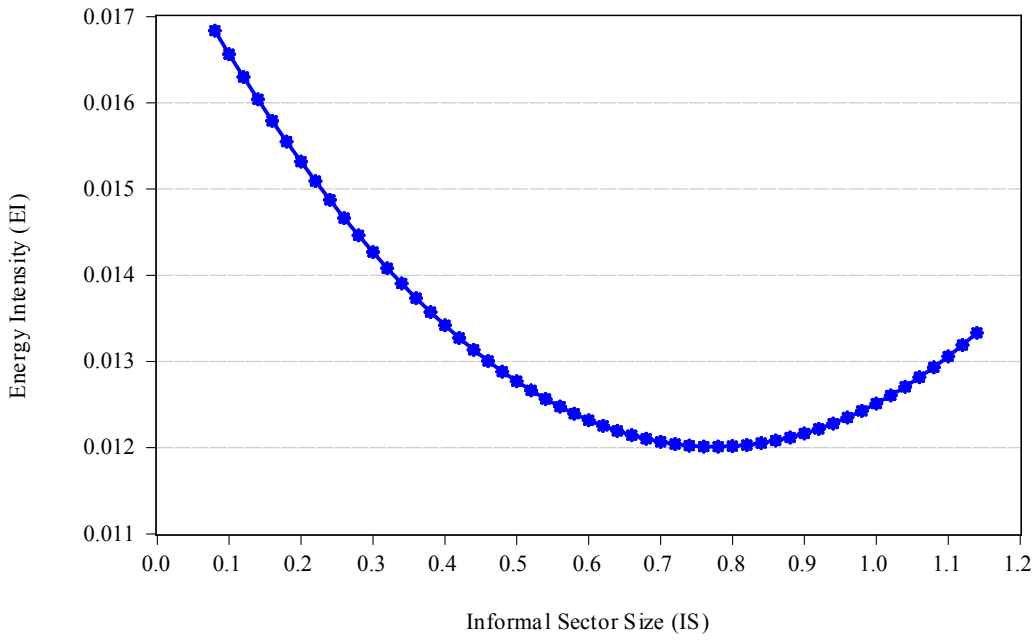

Fig. 1. Non-linear response of energy intensity to informal sector size.

We believe that the reported U-shaped relationship between informality and energy intensity occurs because of two competing forces that work in opposite directions. On

one hand, as documented in the previous section, higher levels of informal sector size leads to lower levels of energy usage, which is the main mechanism through which informality affects energy intensity. Because informal sector has to operate on a small scale to avoid being inspected by the regulatory agencies, the informal sector tends to operate by relying less on capital and more on labor. As labor intensity typically coincides with lower levels of energy usage, an increase in the informal sector size is likely to lead to a lower level of energy intensity.

On the other hand, arguably informal sector is able to evade costs associated with energy usage; and in some cases, it can even rely on illegally free energy in countries with limited rule of law, weak institutions and limited monitoring power. Accordingly, establishments in the informal sector in such economies may not have much incentive to rely on energy-efficient production, and could use energy abundantly at no or minor costs, as long as it enlarges total production. This mechanism could induce a positive relationship between the size of the informal sector and energy intensity. However, we believe this mechanism is not necessarily universal and is valid mostly for developing economies with high levels of informality. As these two competing forces work in opposite direction, the former impact dominates the latter for a wide span of informal sector size, and is only offset for considerably high levels of informality.

Next, we turn to investigating whether an increase and decrease of equal magnitude in informal sector size induces comparable reverse quantitative implications on energy intensity.

1.3.3 Analysis of asymmetry

In this subsection, we present our results from the econometric specification (as described in Equation 5) to detect possible asymmetries in the relationship between the size of the informal economy and energy intensity.

In Table 10, we report that for the whole sample the negative linear relationship between the size of the informal sector is robust and significant, and is not significantly asymmetric (*vis-à-vis* the sign of the change in the informal sector size) at the aggregate level. Further, our estimations reveal no significant asymmetry in the relationship of interest for country subgroups except for the G20 category. The relationship for the G20 group, however, suggests that energy intensity reacts differently to an upward versus a downward change in the size of informality. As β_2 is significantly greater than zero, we report that energy intensity responds less in magnitude to an increase in the informal sector size compared to a decrease of equal magnitude.

Table 10. Analysis of Asymmetry: Country Groups.

	All Sample	oil-importing	emerging	G 20	G 7	OECD
IS_{t-1}	-0.1152^{***}	-0.0674^{**}	-0.1379^{***}	-0.06^{**}	-0.1061	-0.0794^{**}
	(0.0247)	(0.0263)	(0.0268)	(0.0302)	(0.0815)	(0.0331)
$IS_{t-1} \times D$	-0.0023	0.0024	0.0064	0.0126^{***}	0.0115^{**}	0.0029
	(0.0044)	(0.00402)	(0.0047)	(0.0038)	(0.0045)	(0.0026)
EI_{t-1}	0.8189^{***}	0.9521^{***}	0.9602^{***}	0.9128^{***}	0.9635^{***}	0.917^{***}
	(0.0082)	(0.0107)	(0.0139)	(0.015)	(0.0199)	(0.0107)
constant	-0.8454^{***}	-0.3256^{***}	-0.2738^{***}	-0.3531^{***}	-0.377^{**}	-0.4952^{***}
	(0.0443)	(0.0605)	(0.0627)	(0.0621)	(0.1593)	(0.0756)
R^2	0.9635	0.9925	0.9806	0.9933	0.9881	0.9795
Observations	4332	544	568	563	217	990
Countries	159	18	19	19	7	34
F test	3.59	4.96	4.42	3.79	2.65	4.42

In Table 11, we report the results of the same regression for country groups conditioned in terms of average size of the informal sector. The coefficient before the dummy variable is positive, and statistically significant only for the country group with average informal sector size below 20%[10]. It is also worth-mentioning that out of the 35 countries, only 9 out of 19 G20 countries fall into this category.

Table 11. Analysis of Asymmetry: Countries with Different Average Informal Sector Sizes.

	All Sample	> 0.5	$0.4 - 0.5$	$0.3 - 0.4$	$0.2 - 0.3$	< 0.2
IS_{t-1}	-0.1152^{***}	-0.0551	-0.1475^{**}	-0.1651^{***}	-0.0583	-0.1177^{***}
	(0.0247)	(0.1244)	(0.0590)	(0.0440)	(0.0615)	(0.0356)
$IS_{t-1} \times D$	-0.0023	-0.0094	0.0056	-0.0176	0.0042	0.0074^{**}
	(0.0044)	(0.0622)	(0.0133)	(0.0082)	(0.0059)	(0.0033)
EI_{t-1}	0.8189^{***}	0.4687^{***}	0.8344^{***}	0.8219^{***}	0.8111^{***}	0.923^{***}
	(0.0082)	(0.046)	(0.0192)	(0.0129)	(0.0231)	(0.0125)
constant	-0.8454^{***}	-1.4723^{***}	0.0189	-0.9572^{***}	-0.9197^{***}	-0.4829^{***}
	(0.0443)	(0.1662)	(0.0115)	(0.0687)	(0.1075)	(0.0766)
R^2	0.9635	0.9383	0.9735	0.9661	0.9835	0.9914
Observations	4332	380	841	1506	610	995
Countries	159	15	31	56	22	35
F test	3.59	8.38	2.61	3.84	3.48	3.75

Overall, one can conclude that for developed countries with limited informality, the negative relationship between the size of the informal sector and energy intensity displays asymmetry, and suggests that a decrease in the informal sector size generates a higher impact compared to an increase of equal amount.

[10]Since D_t takes a value of 1 and $\beta_2 > 0$, when the size of the informal sector increases, our estimations suggest that the aggregate response of energy intensity to a change in the informal sector is greater in absolute value when the change in the informal sector size is downward.

1.4 Discussion

As we have discussed in previous sections, we have three main findings in our empirical analysis:

First, as estimations with level and first-order differences suggest, there is a significantly negative relationship between informal sector size and energy consumption. Moreover, this relationship is also robust to data stratification with respect to different sets of countries. Considering the fact that informal sector, as opposed to the formal sector, is generally characterized as a highly labor-intensive sector (but not capital intensive), we believe that this result is not surprising, yet is critical to provide actual evidence to support consequential theoretical modeling.

Second, we also document that there is a non-linear relationship between informality and energy intensity. Low and high levels of informality correspond to higher levels of energy intensity whereas medium levels of informality corresponds to lower levels of energy intensity. However, the bottom U-relationship is estimated to be at very high levels of informality (80 $\%$ of GDP), which means that the negative relationship between informality and energy consumption also survives the check for non-linearity. For a similar relationship between informality and pollution indicators, Elgin and Oztunali (2014a, 2014b) argue that the non-linear relationship between informality and pollution might exist due to the existence of two different channels: On the one hand, a larger (smaller) informal sector is associated with lower (higher) capital intensity and therefore less (more) pollution but, on the other hand, a larger (smaller) informal sector can also be associated with more (less) pollution simply because informal sector does not comply with most, if not all, of the government regulations including environmental regulations and standards. Accordingly, the first

channel is called the scale effect of informality and the second one is denoted as the deregulation effect. In the case of pollution, for lower levels of informality, the deregulation effect dominates the scale effect; whereas for larger levels of informality the opposite is true. One can extend the same reasoning to energy consumption rather than pollution and argue that these two effects also exist in this context as well. We do not provide actual empirical evidence in favour of the existence of these two forces in our context; however overall, these two mechanisms working in opposite directions might be the underlying causes behind the non-linearity we documented in our analysis. However, in our case, even though we observe some non-linearity in our regressions, the scale effect is much stronger; which is the main reason behind the dominating negative relationship between energy consumption and informal sector size.

Finally, we also show that there is an asymmetric relationship between informality and energy consumption for a group of countries. Our results suggest that energy consumption reacts less to an increase in informal sector size compared to an decrease so that a decrease in energy consumption boosts energy consumption as a percentage of GDP. This particular feature of the relationship between energy consumption and informality is true for countries with informal sector size lower than 20% of GDP and G20 countries.

Our results might be particularly useful for policy-makers in shaping their attempts to combat with informal sector. Any policy tool designed to reduce informality should take the negative association between informality and energy consumption into account. Moreover, the presence of asymmetry and non-linearity should not be overlooked when designing such policies.

1.5 Concluding remarks

In this paper, using annual cross-country panel data, we investigate the relationship between energy consumption and the size of the informal economy. Our results indicate that there is a significantly negative relationship between these two variables. Moreover, we also obtain some evidence for the presence of non-linearity and asymmetry in this relationship.

We should yield that our empirical findings are highly aggregate and a deeper empirical investigation is needed, especially at the microeconomic (firm or household) level. Moreover, a further analysis is also required on the theoretical side to understand the economic mechanism behind our empirical observations. A full-fledged theoretical model incorporating energy consumption as well as informality can be constructed to gain a deeper insight of our empirical analysis. These we leave to future research.

CHAPTER 2

SOCIO-DEMOGRAPHICS, POLITICAL ATTITUDES AND THE INFORMAL SECTOR EMPLOYMENT

2.1 Introduction

Informal economy corresponds to the set of economic activities that is not subject to government scrutiny. Even though informal sector may also be producing legal products, unlike formal sector, informal sector is imperfectly regulated (Inrig & Moe, 2004; Schneider & Enste, 2000, 2002). So, while this lack of government interference in the informal economy causes lower labor costs and less regulation from the perspective of the producer, it also means less job security, wages lower than the official minimum wage and substandard working conditions for the employees. Therefore, it is natural to expect that individuals' demographic attributes, political attitudes and preferences especially for government interference to the economic sphere as well as their individual norms might be affected by whether or not they are employed in the informal sector, just like their decision to join or stay in the informal employment, if it is a decision after all, might be affected by these factors. So, in this study, I provide micro-level evidence on whether individuals employed in the informal sector have different demographic characteristics, political views or attitudes, and individual norms than the individuals employed in the formal sector .

While economic causes and effects of informal activities has long been studied extensively, there are no previous study which investigates micro-economic predictors of informal employment directly. Most of the studies in the literature are either limited to cross-country analysis depending on macro-level data or focus on tax

morale[11] specifically. The problem with doing that is that informal economy is, by definition, hard to measure. Various ways of measuring informality at the macro-level, such as the Multiple Indicators Multiple Causes (MIMIC) approach or model-based estimations, has been tried but none of these methods managed to overcome the skepticism about the measure of informality. When it comes to tax morale, even though it is shown that tax morale is related the informal sector employment, it does not provide any direct evidence for the relationship between the informal sector employment and other individual level characteristics.

Torgler, Schneider and Schaltegger (2010), for instance, investigates the size of the shadow economy in cantons of Switzerland. Utilizing individual level tax morale data and macro-level measures of the informal economy, they, first, argue that the size of the informal economy is negatively correlated with the extent of local autonomy; then, they show that tax morale is positively related to the trust in court system, religiosity and direct democratic participation, but they do not provide any evidence for the direct micro-level relationship between informal sector employment and above mentioned characteristics. Similarly, Teobaldelli and Schneider (2012) proves that as the extent of direct democracy increases and the preferences of citizens are more nearly reflected in the fiscal policies, individuals' incentives to operate in the informal sector decreases. But they, too, use macro-level data across 57 countries.

Among some other studies which utilize tax morale, Lago-Penas and Lago-Penas (2010) shows that tax morale in European countries is systematically

[11] 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' tendency to be in the informal economy. The method to measure the tax morale in many previous studies as well as this one is to scale individuals' opinion about if cheating on taxes is justifiable or not.

affected by socio-demographic characteristics and political attitudes as much as regional GDP and tax arrangements. Dell'Anno (2009) argues that tax morale is related to individuals' perception of the policy makers effectiveness in exercising control over the relevant macroeconomic variables and safeguarding the interests of citizens. Torgler and Schneider (2007) analyzes the factors that shape or maintain tax morale, and investigates 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) studies the 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.

All of these studies one way or another relate to the analysis we provide in this paper. However, they either do not directly investigate the relationship between informality and individual characteristics but rather use tax morale, or specifically focus on the effects of direct democracy on informality using macro level data and leave demographics and other individual characteristics aside. In this study, instead, I use a self-reported micro-level data set: individuals identify in which sector they are working so we are able to bypass the discussion of measurement methodology. Using the micro-level data collected by World Values Survey in seven lower or upper middle-income developing countries including China, Mexico, Ecuador, Yemen, Peru, South Africa and Egypt, we provide empirical evidence for ways in which being employed in the informal sector relates to the non-economic attitudes of individuals.

Findings of this study are as follows:

First, we show that demographics is significantly relevant to informal sector employment. Specifically, informality is less common among male, middle-aged or married individuals. Those who attended university, no matter if they completed or not, are less likely to be in the informal sector. We also provide evidence for that nature of the work is relevant to the informality: full time, white collar, non-manual/intellectual jobs with higher incomes are less likely to be in the informal sector.

Second, we show that there is a significantly positive correlation between informality and preference for strong state involvement in the economy. Individuals who think 'incomes should be made more equal', 'government ownership of industry and business should be increased', 'government should ensure that everyone is provided for' or 'competition is bad' are more likely to be employed in the informal sector. One implication of this is 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 negatively correlated with the confidence in the political institutions whereas it is negatively correlated with the confidence in the market institutions, which suggests that individuals who are employed in the informal sector are more likely to have a 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.

Fourth, in line with the findings of Torgler et al. (2010) and Teobaldelli and Schneider (2012), we prove that political participation is negatively correlated with

the informality. We show that individuals who 'vote in local or national elections', 'actively involve in politics' or claim their rights through legal ways such as 'signing a petition' or 'attending lawful/peaceful demonstrations' are less likely to be employed in the informal sector. As it was discussed in the above mentioned studies, individuals who are more involved with politics and have a direct effect on public policy are less likely to be employed in informal sector. Unlike prior studies, we provide micro-level evidence.

Lastly, we provide evidence for that religiosity and tax morale are significantly and negatively correlated with the informal sector employment whereas patriotism is insignificant. Although Heinemann and Schneider (2011) shows that countries with more religious citizens do not necessarily have smaller shadow economies per se, we prove that, at the micro-level, religious individuals are less likely to be employed in the informal sector. Similarly, those who think evading taxes is never justifiable in any circumstance are less likely to be in the informal sector as well.

2.2 Data and methodology

2.2.1 Data

We utilize individual level data collected by World Values Survey (WVS). WVS carries out surveys about individuals' values and opinions since 1980s in many countries all over the world but, unfortunately, we do have the informal sector employment data neither for all the countries nor for all the years. Specifically, we use the 6th and last wave of data set which covers the the period between 2010 and 2014. Although the question was asked in 9 countries, we exclude Iraq and Palestine. We believe that ongoing political chaos jeopardized the rule of law in both of these

countries so much that it is very hard to differentiate and define informal sector. List of countries and their classification in terms of their geographical location, level of development and average income level along with the number of observations in each of these countries are presented in Table 12.

Table 12. Countries in the Data Set.

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

Our dependent variable is 'sector of employment': 12,766 individuals from 7 different countries including China, Ecuador, Mexico, Peru, South Africa, Egypt and Yemen reports in which sector they are employed. Answers include 'Public Institutions', 'Private Institutions', 'Private non-profit organizations' and 'Informal Sector'. 5,039 individuals, 39% of all respondents, report that they are employed in informal sector. We have the biggest number of respondents from South Africa while Yemen has the smallest number of respondents. Yemen has the biggest share of informal employment followed by South Africa among all the respondents whereas China has the smallest. Descriptive statistics for 'sector of employment' is shown in Table 13.

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

Table 13. Summary Statistics for Informal Sector Employment.

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Govern./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 24 different independent variables under 5 different categories, namely demographics, support for government involvement, confidence in institutions, political participation and individual norms. Some variables such as gender or marital status are used as dummy variables taking the values of 0 and 1, whereas others scaled between 0 and 1 as discrete variables. For instance, if the individuals are asked to place their view about a matter between 1 and 10, we normalize these values to a scale between 0 and 1. Summary statistics for all the independent variables by countries are shown in the appendix B.

Variables under the category of demographics include ”sex”, ”age”, ”marital status”, ”highest educational level attained”, ”employment status”, ”social class”, ”scales of income” and ”nature of task”. We differentiate individuals in a way to make sense in terms of informal sector employment. It has been argued in the development literature, for instance, that old (retired) and young individuals are more likely to be employed in the informal sector compared to middle-aged individuals for cultural reasons. It has also been argued that human capital is less demanded in the

informal sector and hence informal employment is mostly composed of unskilled labor. Accordingly, we differentiate individuals according to their education level or whether they perform intellectual or manual tasks at the workplace. Answers at the extremes which corresponds to the values of 0 and 1 are presented in the Table 14. We expect coefficients for these variables to take negative values.

Table 14. Variables and Assigned Values: Demographics.

Sex	1 Male 2 Female
Age	1 30-49(middle age) 0 Up to 29 or 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 regarding individuals' opinions and preferences for government involvement in the economic sphere includes 'preference for Income equality', 'private vs. state ownership of business and industry', 'Belief in the government delivery' and 'competition is good or harmful'. Through these variables, we want to investigate whether individual's preferences regarding the government's role in the economic structure is somehow related to their employment in the informal sector. Respondents scale their opinions between 1 and 10 and we normalize the

assigned values to a scale between 0 and 1. Values for the answers at the extremes are represented in Table 15. We expect coefficients for these variables to have positive values.

Table 15. Variables and Assigned Values: 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 or 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' confidence in institutions operating in the market and political sphere. It includes 'confidence in labor unions', 'confidence in major companies', 'confidence in government at your capital' and 'confidence in civil services'. Specifically, respondents are asked how much confidence they have in each of these institutions in a scale of 1 to 4 and we normalize these values. Note that these variables do not measure the confidence people have in the currently functioning institutional bodies but rather their belief in the concept of these institutions in general. Hence, we believe that individuals' trust in the political and economic institutions reveals important differences between informal and formal workers, that are specifically relevant to the political economy of informal economy.

Code values of the answers to these questions are presented in Table 16. We expect coefficients of the variables associated with the confidence in the market institutions to be negative whereas variables associated with the confidence in the political institutions to be positive.

Table 16. Variables and Assigned Values: Confidence in Institutions.

Confidence in Labour 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 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 regarding political participation includes 'vote in local elections', 'vote in national elections', 'political action: signing a petition', 'political action: Attending lawful/peaceful demonstrations' and 'active/inactive member of political party'. As it was mentioned in the previous section, a number of studies in the literature claims that more political participation means less informality. By political participation, we mean the ways through which individuals can affect the public policy or the way central or local governmental organization functions. 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 by claiming their rights through legal and legitimate procedures and using their power to change the way political authority functions. Values corresponding to the answers at the extremes are show in Table 17 below.

Table 17. Variables and Assigned Values: 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

Last category of variables is about individual's personal norms such as religiosity, patriotism and tax morale. This category includes "how often do you attend religious services", "willingness to fight for your country" and "is cheating on taxes justifiable". In line with the previous literature (i.e. Torgler & Schneider, 2007; Heinemann & Schneider, 2011), instead of using individual's self-claim about their religiosity, we use the answers about whether or not they practice their religion. Similarly, for patriotism, we believe that whether or not people would fight for their country is a between measure of their patriotism instead of if they are proud of their nationality.

Also note that the last question in this category is commonly used in the literature to measure "tax morale" (i.e. Alm & Torgler, 2006; Torgler & Schneider, 2007). Specifically, individuals are asked to scale how much they agree with the statement that 'cheating on taxes is never justifiable'. Following previous studies, instead of normalizing answers to a scale of 0 and 1, we make this variable to take the value of 1 for responses that cheating on taxes is "never justifiable" and 0 otherwise

because ”cheating on taxes is never justifiable” suggests a natural cut-off point at the value of 10. Values assigned to each answer in this category is shown in Table 18.

Table 18. Variables and Assigned Values: Individual Norms.

How often do you attend religious services	1 More than once a week 0 Never, practically never
Willingness to fight for your country	1 Yes 0 No
Is cheating on taxes justifiable	1 Never justifiable 0 Always justifiable

2.2.2 Econometric specification

Since our dependent variable is a dummy variable, we use maximum likelihood probit model for our regressions. First, using country dummies for each of 7 countries, we regress informality over independent variables one by one using demographic characteristics as control variables. The probit regression takes the following form:

$$E(IS|X) = Pr(IS = 1|X) = \Phi\big(\beta_1 X_1 + \sum_{i=2}^{n} \beta_i X_i + \sum_{j=1}^{7} \theta_j D_j\big) \tag{6}$$

where left-hand side of the estimation equation 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 represents independent variables: While X_1 is the variable of interest, others are demographic control variables including sex, age, marital status, social class and income level. D_j represents the dummy variables for countries and there are 7 of them. While probability of being in the informal sector increases with β_i, note that since this is a probit model regression, it does not really capture how much the probability would increase as a reaction to a

one-unit increase in the independent variable. Hence, we estimate the marginal effects ($\frac{\partial Pr(IS=1)}{\partial X_1}$) of each independent variable as well. Note that marginal effects, unlike the regression coefficient β, does translate into a similar change in the probability, that is marginal effects show the change in probability when the predictor or independent variable increases by one unit.

Secondly, although we can regress informality over all the variables in a category together, it should be noted that such a regression suffers from multi-collinearity between the independent variables since we expect variables in a category to be correlated with each other. For instance, it would be natural to expect that individuals who vote in the national elections are likely to vote in the local elections as well. Therefore, we want to create some composite variables for each category of variables so we can regress informality over multiple independent variables in order to capture the specific explanatory power of each category of predictors compared to others without having a collinearity problem. Through principal component analysis, we create 1 variable out of a number of variables in a category; so, we create 5 composite variables for each of 5 categories. PCA analyzes all the variance in the variables and reorganizes them into a new set of independent components. Then, we reduce the predictors to a single composite via the sum of the weighted variables. We use the following regression model which uses these composite variables:

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

where first six independent variables represent one of the categories, namely Support for Government Involvement, Confidence in Market Institutions, Confidence in the

Political Institutions, Political Participation and Individual Norms. Others are demographic control variables including sex, marital status, age, social class, and income level. Similar to the previous regression model, we use country dummies to control for country differences.

For the purpose of the robustness checking, we provide the estimated results of within-country regressions in appendix C. Not all the results prevail for different countries though; one reason for the lack of complete consistency is that small sample sizes in specific countries causes the standard errors to increase. Another reason is that some of the variables or even the categories of variables may not apply to all of the countries. For instance, variables related to political participation are not significantly different from zero in China. However, overall, we can say that the obtained results are more or less robust to country specific differences.

2.3 Results

In this section, we provide the results for all the estimations described in equation (6) and (7). For all of the estimations, we use some demographic variables such as income, sex, age, marital status and social class as control variables. In following subsections, we first report the results for different categories of independent variables. In the last subsection, we report the estimated coefficients for composite variables obtained through principal component analysis.

2.3.1 Demographics

Using scales of income, sex, age, marital status and social class as control variables, we exercise the estimation model described in equation (6) over independent variables of education, employment status and nature of task.

First, in all of the regressions, control variables have significant and negative coefficients which show that men, middle aged, married individuals and those who earn a high income or have white collar jobs are less likely to be employed in the informal sector. Marginal effects show that sex makes the most difference in the probability of being employed in the informal sector. This finding is consistent with the previous findings especially in the development literature as it has been claimed that in developing countries women are more commonly employed in the informal sectors compared to men. Similarly, middle aged are more common in informal employment. That is probably because retired people are mostly employed unregistered in order to get full pensions from the government and young workers need to spend some time in the labor market until they find formal jobs with better pays and conditions.

Like white collar workers, those who are educated (attended university) are less commonly found in the informal sector as well. Estimated coefficient for nature of task is also negative and the magnitude of the marginal effect is comparatively very high for education and nature of task both. Combining, we can claim that human capital is not demanded in the informal sector as much as it is demanded in the formal sector. As uneducated workers who carry out manual jobs are more likely to be employed in the informal sectors.

Lastly, the employment status is also significantly related to informal sector employment. Those who work full time are much less likely to be employed in the informal sector as the magnitude of the marginal effect is very high. Apparently, part-time workers, students and retired are more commonly employed in the informal sector. It should be noted that, putting together with marital status, sex and age profile, results suggest that those who are not perceived as wage earners of a family are more likely to be employed informally compared to others. So although we do not have means to test this claim, we can make the case that culture is an important dynamic of informal sector employment.

We provide the results for the demographic variables in Table 19.

Table 19. Estimated Results: Demographics.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Education (Attended University)	coeff.	-0.603^{***}			-0.459^{***}	-0.596^{***}
	mar.eff.	-0.224			-0.171	-0.177
	p value	(0.000)			(0.000)	(0.000)
Employment Status (Full Time)	coeff.		-1.32^{***}		-1.282^{***}	
	mar.eff.		-0.455		-0.442	
	p value		(0.000)		(0.000)	
Nature of Task (non-manual)	coeff.			-0.303^{***}		-0.138^{**}
	mar.eff.			-0.103		-0.046
	p value			(0.000)		(0.012)
Scales of Income (High Income)	coeff.	-0.390^{***}	-0.296^{***}	-0.276^{***}	-0.202^{***}	-0.184^{**}
	mar.eff.	-0.154	-0.116	-0.094	-0.079	-0.062
	p value	(0.000)	(0.000)	(0.000)	(0.001)	(0.011)
Sex (Male)	coeff.	-0.534^{***}	-0.398^{***}	-0.137^{***}	-0.391^{***}	-0.130^{***}
	mar.eff.	-0.208	-0.155	-0.047	-0.152	-0.044
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	coeff.	-0.237^{***}	-0.082^{***}	-0.188^{***}	-0.070^{**}	-0.169^{***}
	mar.eff.	-0.093	-0.032	-0.064	-0.027	-0.056
	p value	(0.000)	(0.004)	(0.000)	(0.014)	(0.000)
Marital Status (Married)	coeff.	-0.195^{***}	-0.128^{***}	-0.108^{***}	-0.155^{***}	-0.130^{***}
	mar.eff.	-0.077	-0.050	-0.037	-0.061	-0.044
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Social Class (White Collar)	coeff.	-0.106^{***}	-0.158^{***}	-0.250^{***}	-0.080^{*}	-0.155^{***}
	mar.eff.	-0.041	-0.061	-0.080	-0.031	-0.050
	p value	(0.009)	(0.000)	(0.000)	(0.065)	(0.001)
Observations		10.532	10.546	7.793	10.532	7.770
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

2.3.2 Support for government involvement

In this category, we use the self reported opinions of individuals in order to estimate the relationship between informal sector employment and individuals' support for government involvement in the economy.

Estimated results suggest that those who are employed in the informal sector are more likely to support economic systems which requires more government involvement in the economy whether it be in the form of redistribution or direct government ownership of business and industry. 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. Moreover, they believe that "competition is harmful because it brings the worst out the worst in the people".

Although the econometric analysis does not convey any information about why workers in the informal sector prefers government ownership or more redistribution, we can speculate that informally employed individuals have a high opinion of an interventionist government probably because they constitute the most disadvantaged segment of the labor force in the market. As it is pointed out in the introduction, lack of government interference means substandard working conditions, less job security and lower pays for most of the informal workers. Considering that public jobs are almost always formal, it is expected to have a tendency for government ownership among individuals who are employed in the informal sector.

It should also be noted that most of the employees operating informally do not pay any severance payment. Moreover, workers in the informal sector are not entitled to collect any unemployment benefit in most cases, either. Hence, probably because

most of these workers have no insurance mechanism against unemployment and bad luck except for governments' redistributive policies, they are more likely to support a more effective and extensive redistribution policy, and anyone in need to be taken care of by the government.

We provide the results for variables in this category in Table 20.

Table 20. Estimated Results: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	0.043				0.074*
	mar.eff.	0.017				0.029
	p value	(0.264)				(0.072)
Against Private Ownership	coeff.		0.098**			0.084*
	mar.eff.		0.036			0.033
	p value		(0.020)			(0.052)
Belief in Government Delivery	coeff.			0.122***		0.116***
	mar.eff.			0.048		0.045
	p value			(0.003)		(0.009)
Competition is Bad	coeff.				0.132***	0.110**
	mar.eff.				0.052	0.043
	p value				(0.004)	(0.023)
Scales of Income (High Income)	coeff.	−0.506***	−0.511***	−0.535***	−0.535***	−0.532***
	mar.eff.	−0.200	−0.108	−0.211	−0.211	−0.210
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sex (Male)	coeff.	−0.552***	−0.545***	−0.556***	−0.545***	−0.545***
	mar.eff.	−0.216	−0.151	−0.217	−0.212	−0.212
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	coeff.	−0.265***	−0.257***	−0.267***	−0.262***	−0.256***
	mar.eff.	−0.104	−0.033	−0.105	−0.034	−0.101
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marital Status (Married)	coeff.	−0.165***	−0.165***	−0.165***	−0.169***	−0.163***
	mar.eff.	−0.065	−0.048	−0.065	−0.067	−0.064
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Social Class (White Collar)	coeff.	−0.220***	−0.216***	−0.214***	−0.209***	−0.212***
	mar.eff.	−0.085	−0.061	−0.083	−0.081	−0.082
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		10.276	10.080	10.347	10.298	9.946
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

2.3.3 Confidence in institutions

Estimated coefficients are significantly different from 0 for variables associated with confidence in unions, major companies and government but it is insignificant for variables associated with confidence in civil services. Results suggest that individuals' confidence in the central government at the capital of their country increases while their confidence in major companies as well as trade unions decreases with the informal sector employment; so, workers in the informal sector are less likely to trust market institutions compared to formally employed workers whereas they trust government more.

It should be noted, however, that the wording of the survey questions does not imply the current government or any specific trade union or company currently functioning in the market but rather the concept of these institutions in general. To put it other way, rather than trade unions or major companies, workers in the informal sector believe in the government as an institutional body which can be trusted and depended probably because they are harmed by the lack of government scrutiny in the market.

So, we can claim that the results are consistent with the implications of the previous subsection, that is individuals who are employed in the Informal sector prefers government rather than market institutions, including even the ones supposedly protecting their rights.

Results for variables in this category are provided in Table 21.

Table 21. Estimated Results: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	-0.137^{***}				-0.188^{***}
	mar.eff.	-0.054				-0.074
	p value	(0.003)				(0.000)
Confidence in Major Companies	coeff.		-0.058			-0.095^{*}
	mar.eff.		-0.023			-0.037
	p value		(0.180)			(0.063)
Confidence in Government	coeff.			0.102^{**}		0.210^{***}
	mar.eff.			0.040		0.083
	p value			(0.015)		(0.000)
Confidence in Civil Services	coeff.				0.038	0.052
	mar.eff.				0.015	0.020
	p value				(0.405)	(0.373)
Scales of Income (High Income)	coeff.	-0.530^{***}	-0.525^{***}	-0.506^{***}	-0.524^{***}	-0.546^{***}
	mar.eff.	-0.209	-0.207	-0.200	-0.206	-0.215
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sex (Male)	coeff.	-0.507^{***}	-0.511^{***}	-0.551^{***}	-0.536^{***}	-0.509^{***}
	mar.eff.	-0.198	-0.199	-0.215	-0.209	-0.198
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	coeff.	-0.284^{***}	-0.272^{***}	-0.263^{***}	-0.264^{***}	-0.279^{***}
	mar.eff.	-0.111	-0.106	-0.103	-0.104	-0.109
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marital Status (Married)	coeff.	-0.165^{***}	-0.164^{***}	-0.167^{***}	-0.164^{***}	-0.154^{***}
	mar.eff.	-0.065	-0.064	-0.066	-0.065	-0.061
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Social Class (White Collar)	coeff.	-0.211^{***}	-0.227^{***}	-0.219^{***}	-0.216^{***}	-0.225^{***}
	mar.eff.	-0.082	-0.088	-0.085	-0.084	-0.087
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		9.348	9.718	10.794	10.126	9.014
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

2.3.4 Political participation

In this subsection, we analyze the relationship between the extent of individuals' political participation and informal sector employment. Results suggest that political participation is negatively correlated with the informal sector employment. Individuals who actively or inactively engage in political processes or use legal ways to claim their rights are less likely to be employed in the informal sector.

Specifically, active political membership most strongly correlated with informal sector employment as its marginal effect has the biggest value in absolute terms

compared to other variables. An Individuals who is a member of a political party or movement 10% less likely to be employed in the informal sector compared to others. Voting in local or national elections as forms of inactive political participation are significantly and negatively correlated with informality as well. Moreover, individuals who claim their rights either in the form of signing a petition or attending peaceful/lawful demonstrations are also less likely to be found in the informal sector.

Although our results do not suggest any causation, in line with the arguments of some previous studies mentioned in the introduction, we can claim that individuals whose preferences more nearly reflected in the public policy have less incentive to be employed in the informal sectors (Torgler et al., 2010; Teobaldelli & Schneider, 2012). Citizens who directly or indirectly participate in political processes either at 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. 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 desires especially in an environment which supports democratic institutions. Since being informal comes with the price of less public services, it is, therefore, less likely for a politically active individual to avoid government regulations and restrictions.

Another way to read the findings of this category is that individuals who are employed in the informal sector have less incentive to affect the public policy as changes in the public policy does not affect them as much as those who are employed in the formal sector. It should be noted that regulations related to labor markets or other issues do not affect workers in the informal sector directly.

Results for variables in this category are provided in Table 22.

Table 22. Estimated Results: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vote in Local Elections	coeff.	-0.090^{***}					-0.093^{***}	
	mar.eff.	-0.037					-0.036	
	p value	(0.001)					(0.000)	
Vote in National Elections	coeff.		-0.126^{***}					-0.132^{***}
	mar.eff.		-0.050					-0.051
	p value		(0.000)					(0.000)
Signing a Petition	coeff.			-0.199^{***}			-0.124^{**}	-0.123^{**}
	mar.eff.			-0.077			-0.048	-0.048
	p value			(0.000)			(0.012)	(0.012)
Engaging in Demonstration	coeff.				-0.210^{***}		-0.152^{***}	-0.152^{***}
	mar.eff.				-0.081		-0.058	-0.059
	p value				(0.000)		(0.004)	(0.003)
Active Political Membership	coeff.					-0.265^{***}	-0.220^{***}	-0.232^{***}
	mar.eff.					-0.103	-0.085	-0.090
	p value					(0.000)	(0.000)	(0.000)
Scales of Income (High Income)	coeff.	-0.573^{***}	-0.549^{***}	-0.474^{***}	-0.461^{***}	-0.509^{***}	-0.479^{***}	-0.455^{***}
	mar.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)	coeff.	-0.575^{***}	-0.579^{***}	-0.524^{***}	-0.534^{***}	-0.545^{***}	-0.538^{***}	-0.541^{***}
	mar.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)	coeff.	-0.267^{***}	-0.265^{***}	-0.250^{***}	-0.249^{***}	-0.253^{***}	-0.244^{***}	-0.240^{***}
	mar.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)	coeff.	-0.172^{***}	-0.172^{***}	-0.147^{***}	-0.157^{***}	-0.162^{***}	-0.160	-0.154^{***}
	mar.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)	coeff.	-0.211^{***}	-0.210^{***}	-0.220^{***}	-0.221^{***}	-0.214^{***}	-0.220^{***}	-0.222^{***}
	mar.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
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

2.3.5 Individual norms

Although there has been many studies which related religiosity and tax morale to the informal sector employment in the literature, we want to contribute this discussion via the micro-level analysis we provide in this section. Results suggest that religiosity and tax morale are significantly and negatively correlated with informal sector employment whereas patriotism is not significant.

Utilizing macro-level data, Schneider and Heinemann (2011) argued that although there are differences among religions, it is not tangible to say that countries with more religious citizens, *ceteris paribus*, have smaller sizes of informality. However, we provide evidence for that individuals who practice their religion more than others are less likely to be employed in the informal sector. So we document the difference between macro and micro level relationship between informality and religiosity. As it was suggested in Schneider and Heinemann (2011), one reason for the negative relationship might be that religion imposes an additional immaterial cost of evading taxes especially when the individual perceives the government as a legitimate institution.

Similarly, tax morale is negatively correlated with informality as well. As expected individuals who think avoiding taxes is never justifiable are less likely to be in the informal sector. However, it should be noted that the magnitude of the marginal effect is quite small comparatively which poses questions for the use of tax morale as a proxy for informality which is a common practice in the literature.

Results for variables of this category are provided in Table 23.

Table 23. Estimated Results: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	-0.292^{**}			-0.268^{***}	-0.283^{***}
	mar.eff.	-0.115			-0.106	-0.112
	p value	(0.021)			(0.000)	(0.000)
Patriotism	coeff.		-0.024			-0.021
	mar.eff.		-0.009			-0.008
	p value		(0.395)			(0.470)
Tax Morale	coeff.			-0.074^{***}	-0.064^{**}	-0.060^{**}
	mar.eff.			-0.029	-0.025	-0.024
	p value			(0.006)	(0.021)	(0.035)
Scales of Income (High Income)	coeff.	-0.517^{***}	-0.510^{***}	-0.543^{***}	-0.524^{***}	-0.506^{***}
	mar.eff.	-0.204	-0.201	-0.214	-0.207	-0.200
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sex (Male)	coeff.	-0.550^{***}	-0.566^{***}	-0.545^{***}	-0.546^{***}	-0.551^{***}
	mar.eff.	-0.215	-0.221	-0.212	-0.213	-0.215
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	coeff.	-0.261^{***}	-0.257^{***}	-0.276^{***}	-0.274^{***}	-0.269^{***}
	mar.eff.	-0.103	-0.101	-0.108	-0.107	-0.105
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marital Status (Married)	coeff.	-0.138^{***}	-0.157^{***}	-0.160^{***}	-0.137^{***}	-0.135^{***}
	mar.eff.	-0.054	-0.062	-0.063	-0.054	-0.053
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Social Class (White Collar)	coeff.	-0.219^{***}	-0.211^{***}	-0.226^{***}	-0.228^{***}	-0.224^{***}
	mar.eff.	-0.085	-0.082	-0.088	-0.088	-0.087
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations		10.320	9.768	10.125	9.903	9.209
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

2.3.6 Multiple composite variables

In previous subsections, we regressed informal sector employment over variables of different categories. Although we provide results for regressions with multiple variables of the same category in the last columns of each table, it should be noted that these regressions are not free of bias since we expect most of the variables in a category to be correlated with each other. So, In this last subsection, we report the results of the estimations described in equation (7). Unlike previous estimations, in this part we regress informality over multiple composite variables each of which represents a category of variables.

We can say that composite variables acquired through principal component analysis are much less likely to be correlated with each other. We provide the results with different demographic control variables so we show that our results are robust to specifications with different control variables. Since the estimation with variables of employment status and nature of task suffers multicollinearity, we do not use them in the same regression.

Estimated results are significant for all the composite variables and consistent with the previous findings. Although the marginal effects change for specifications with different control variables, overall, we can say that demographic variables, especially sex, university attendance and status of employment makes the most difference in the probability of being employed in the informal sector. Among the composite variables, confidence in government has the largest marginal effect in absolute value followed by political participation.

Estimated coefficients for the variables associated with support for government involvement and confidence in market institutions are also significant and similar for all the regressions; however, coefficient values for individual norms are not significantly different from zero for regressions which uses nature of task as a control variable. Overall, it can be said that estimated results with the composite variables support the documented relationship between informal sector employment and other characteristics in the previous sections.

Results are shown in Table 24.

Table 24. Estimated Results: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Support for Government Involv.	coeff.	0.026^{**}	0.043^{***}	0.083^{***}	0.074^{***}	0.043^{***}
	mar.eff.	0.010	0.017	0.026	0.023	0.016
	p value	(0.047)	(0.001)	(0.000)	(0.000)	(0.003)
Confidence in Market institution	coeff.	-0.055^{***}	-0.051^{***}	-0.056^{***}	-0.057^{***}	-0.032^{*}
	mar.eff.	-0.021	-0.020	-0.017	-0.017	-0.012
	p value	(0.000)	(0.001)	(0.000)	(0.006)	(0.079)
Confidence in Government	coeff.	0.227^{***}	0.242^{***}	0.167^{**}	0.048^{**}	0.053^{***}
	mar.eff.	0.089	0.095	0.052	0.015	0.020
	p value	(0.000)	(0.000)	(0.018)	(0.020)	(0.004)
Political Participation	coeff.	-0.076^{***}	-0.079^{***}	-0.046^{***}	-0.035^{**}	-0.061^{***}
	mar.eff.	-0.030	-0.031	-0.014	-0.011	-0.023
	p value	(0.000)	(0.000)	(0.000)	(0.027)	(0.000)
Individual Norms	coeff.	-0.052^{***}	-0.057^{***}	-0.016	-0.015	-0.050^{***}
	mar.eff.	-0.020	-0.022	-0.005	-0.004	-0.019
	p value	(0.002)	(0.001)	(0.441)	(0.489)	(0.005)
Education (Attended University)	coeff.				-0.617^{***}	-0.475^{***}
	mar.eff.				-0.164	-0.172
	p value				(0.000)	(0.000)
Employment Status (Full Time)	coeff.					-1.300^{***}
	mar.eff.					-0.434
	p value					(0.000)
Nature of Task (non-manual)	coeff.			-0.241^{***}	-0.090	
	mar.eff.			-0.076	-0.028	
	p value			(0.000)	(0.176)	
Scales of Income (High Income)	coeff.		-0.554^{***}	-0.351^{***}	-0.236^{***}	-0.240^{***}
	mar.eff.		-0.217	-0.111	-0.073	-0.092
	p value		(0.000)	(0.000)	(0.007)	(0.002)
Sex (Male)	coeff.	-0.527^{***}	-0.540^{***}	-0.125^{***}	-0.115^{***}	-0.385^{***}
	mar.eff.	-0.204	-0.209	-0.040	-0.036	-0.147
	p value	(0.000)	(0.000)	(0.001)	(0.003)	(0.000)
Middle Age (29-50)	coeff.	-0.259^{***}	-0.263^{***}	-0.211^{***}	-0.197^{***}	-0.084^{**}
	mar.eff.	-0.101	-0.102	-0.066	-0.061	-0.032
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.018)
Marital Status (Married)	coeff.	-0.147^{***}	-0.150^{***}	-0.151^{***}	-0.173^{***}	-0.124^{***}
	mar.eff.	-0.058	-0.059	-0.048	-0.054	-0.048
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Social Class (White Collar)	coeff.	-0.348^{***}	-0.213^{***}	-0.219^{***}	-0.135^{**}	-0.067
	mar.eff.	-0.132	-0.082	-0.065	-0.040	-0.025
	p value	(0.000)	(0.000)	(0.000)	(0.015)	(0.188)
Observations		7.368	7.223	5.510	5.496	7.190
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

2.4 Concluding remarks

In this paper, we analyze the relationship between informal sector employment and socio-demographic attributes, political opinions and attitudes, and norms of individuals at the micro level. Our results indicate that all these characteristics are strongly related to informal sector employment. Individuals' demographic attributes are strong predictors of informal sector. Confidence in government as well as support for government involvement in the economy is positively correlated with informal sector employment whereas political participation is negatively correlated with informality. Individuals norms such as religiosity and tax morale are negatively correlated with informal sector employment.

Although our study says a lot especially in terms of 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 might be more revealing. Moreover, a macro-level study which investigates the robustness of our results at the macro level might bring about interesting results as well. We leave these to future research.

APPENDIX A

COUNTRY GROUPS IN THE FIRST CHAPTER

Country Groups

Oil-Importing Economies: Australia, Belgium, Canada, China, France, Germany, Greece, India, Italy, Japan, Republic of Korea, Netherlands, Poland, Singapore, Spain, Thailand, United Kingdom, United States.

Emerging Economies: Argentina, Bangladesh, Brazil, Chile, China, Egypt, Hungary, India, Indonesia, Iran, Malaysia, Mexico, Nigeria, Pakistan, Philippines, South Africa, Thailand, Turkey, Vietnam.

G20[13]: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, United States.

G7: Canada ,France, Germany, Italy, Japan, United Kingdom, United States.

OECD : Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Republic of Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.

Country Groups with Average Informal Sector Sizes

IS>50%: Azerbaijan, Benin, Bolivia, Cambodia, Chad, Equatorial Guinea, The Gambia, Georgia, Guatemala, Haiti, Panama, Peru, Tanzania, Thailand, Zimbabwe.

[13]the European Union is excluded

IS $\in$ [40%-50%): Armenia, Bangladesh, Belarus, Belize, Bosnia and Herzegovina, Burkina Faso, Central African Republic, Republic of Congo, Costa Rica, Cote d'Ivoire, El Salvador, Eritrea, Gabon, Guinea, Honduras, Madagascar, Mali, Moldova, Mozambique, Nepal, Nicaragua, Nigeria, Philippines, Senegal, Sierra Leone, Sri Lanka, Suriname, Uganda, Ukraine, Uruguay, Zambia.

IS $\in$ [30%-40%): Albania, Algeria, Angola, Bahamas, Bhutan, Botswana, Brazil, Brunei, Bulgaria, Burundi, Cameroon, Cape Verde, Colombia, Comoros, Dem. Rep. Congo, Croatia, Dominican Republic, Ecuador, Egypt, Estonia, Ethiopia, Fiji, Ghana, Guinea-Bissau, Guyana, Jamaica, Kazakhstan, Kenya, Republic of Korea, Kyrgyzstan, Laos, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia, Malawi, Malaysia, Maldives, Mauritania, Mexico, Morocco, Niger, Pakistan, Papua New Guinea, Paraguay, Russia, Rwanda, Sudan, Swaziland, Tajikistan, Togo, Trinidad & Tobago, Tunisia, Turkey.

IS $\in$ [20%-30%): Argentina, Belgium, Chile, Cyprus, Greece, Hungary, India, Israel, Italy, Malta, Mauritius, Namibia, Poland, Portugal, Romania, Slovenia, Solomon Islands, South Africa, Spain, United Arab Emirates, Venezuela, Yemen.

IS $<$ 20%: Australia, Austria, Bahrain, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hong Kong, Iceland, Indonesia, Iran, Ireland, Japan, Jordan, Kuwait, Luxembourg, Macao, Mongolia, Netherlands, New Zealand, Norway, Oman, Qatar, Saudi Arabia, Singapore, Slovak Republic, Sweden, Switzerland, Syria, United Kingdom, United States, Vietnam.

APPENDIX B

SUMMARY STATISTICS OF THE VARIABLES IN THE SECOND CHAPTER

Table 25. 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 26. Summary Statistics: Age

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Up to 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
Std.Dev	15.37	14.37	16.14	15.18	16.42	15.67	15.16	13.28

Table 27. 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 28. 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	843	0	258	100	131	254	56	42
school (technical)	6.6%	0.0%	21.5%	5.0%	10.8%	7.2%	3.7%	4.2%
Complete secondary	2,962	1,070	345	476	322	275	414	64
school (technical)	23.2%	46.5%	28.7%	23.8%	26.6%	7.8%	27.2%	6.4%
Incomplete secondary	1,238	0	7	160	91	907	26	39
school (university)	9.7%	0.0%	0.6%	8.0%	7.5%	25.7%	1.7%	3.9%
Complete secondary	2,349	380	2	292	167	1,292	134	77
school (university)	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 29. 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 30. 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 31. 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 32. Summary Statistics: Nature of Tasks: Manual vs. Intellectual

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Manual tasks	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 tasks	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

Table 33. Summary Statistics: Preference for Income Equality

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Incomes should be made	2,196	343	179	488	154	360	535	140
more equal	17.2%	14.9%	14.9%	24.4%	12.7%	10.2%	35.1%	14.0%
2	843	322	102	92	59	88	136	45
	6.6%	14.0%	8.5%	4.6%	4.9%	2.5%	8.9%	4.5%
3	945	350	121	82	74	141	137	32
	7.4%	15.2%	10.1%	4.1%	6.1%	4.0%	9.0%	3.2%
4	817	198	72	108	82	261	69	33
	6.4%	8.6%	6.0%	5.4%	6.8%	7.4%	4.5%	3.3%
5	1,506	200	111	292	184	512	108	96
	11.8%	8.7%	9.2%	14.6%	15.2%	14.5%	7.1%	9.6%
6	1,085	152	93	136	98	498	67	46
	8.5%	6.6%	7.7%	6.8%	8.1%	14.1%	4.4%	4.6%
7	1,149	184	99	120	111	466	81	82
	9.0%	8.0%	8.2%	6.0%	9.2%	13.2%	5.3%	8.2%
8	1,328	200	142	188	155	403	119	117
	10.4%	8.7%	11.8%	9.4%	12.8%	11.4%	7.8%	11.7%
9	868	108	127	120	98	187	120	109
	6.8%	4.7%	10.6%	6.0%	8.1%	5.3%	7.9%	10.9%
We need larger income	1,634	101	153	360	144	526	152	204
differences as incentives	12.8%	4.4%	12.7%	18.0%	11.9%	14.9%	10.0%	20.4%
No answer	128	110	1	4	13	0	0	3
	1.0%	4.8%	0.1%	0.2%	1.1%	0.0%	0.0%	0.3%
Don't know	268	37	2	8	36	88	0	93
	2.1%	1.6%	0.2%	0.4%	3.0%	2.5%	0.0%	9.3%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	5.4	4.45	5.55	5.36	5.76	6.09	4.3	6.36
Std.Dev	3.09	2.75	3.11	3.33	2.91	2.72	3.33	3.23
Base mean	12.37	2.153	1.199	1.986	1.161	3.444	1.523	904

Table 34. Summary Statistics: Private vs State Ownership of Business

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Private ownership	1,136	97	112	300	117	251	213	50
of business	8.9%	4.2%	9.3%	15.0%	9.7%	7.1%	14.0%	5.0%
2	536	136	87	66	42	74	55	82
	4.2%	5.9%	7.2%	3.3%	3.5%	2.1%	3.6%	8.2%
3	753	209	91	96	79	162	67	43
	5.9%	9.1%	7.6%	4.8%	6.5%	4.6%	4.4%	4.3%
4	740	182	82	94	94	233	32	27
	5.8%	7.9%	6.8%	4.7%	7.8%	6.6%	2.1%	2.7%
5	1,877	336	222	336	186	568	93	137
	14.7%	14.6%	18.5%	16.8%	15.4%	16.1%	6.1%	13.7%
6	1,264	253	119	140	109	508	91	46
	9.9%	11.0%	9.9%	7.0%	9.0%	14.4%	6.0%	4.6%
7	1,213	219	102	152	104	455	137	46
	9.5%	9.5%	8.5%	7.6%	8.6%	12.9%	9.0%	4.6%
8	1,596	276	125	212	154	473	271	89
	12.5%	12.0%	10.4%	10.6%	12.7%	13.4%	17.8%	8.9%
9	1,111	152	127	132	94	247	230	127
	8.7%	6.6%	10.6%	6.6%	7.8%	7.0%	15.1%	12.7%
Government ownership	1,813	131	127	424	151	438	332	215
of business	14.2%	5.7%	10.6%	21.2%	12.5%	12.4%	21.8%	21.5%
No answer	153	113	2	12	25	0	0	3
	1.2%	4.9%	0.2%	0.6%	2.1%	0.0%	0.0%	0.3%
Don't know	549	198	5	38	53	124	0	135
	4.3%	8.6%	0.4%	1.9%	4.4%	3.5%	0.0%	13.5%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	6.13	5.7	5.73	6.05	5.94	6.24	6.69	6.66
Std.Dev	2.81	2.47	2.78	3.13	2.8	2.53	3.13	3.01
Base mean	12.058	1.989	1.194	1.95	1.132	3.408	1.523	862

Table 35. Summary Statistics: Belief in Government Delivery

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
The government should ensure	2,834	285	157	642	204	410	672	460
everyone is provided for	22.2%	12.4%	13.1%	32.1%	16.9%	11.6%	44.1%	46.0%
2	996	207	114	112	88	145	219	108
	7.8%	9.0%	9.5%	5.6%	7.3%	4.1%	14.4%	10.8%
3	1,187	419	99	126	83	212	166	80
	9.3%	18.2%	8.2%	6.3%	6.9%	6.0%	10.9%	8.0%
4	906	242	76	128	125	222	53	62
	7.1%	10.5%	6.3%	6.4%	10.3%	6.3%	3.5%	6.2%
5	1,506	225	156	290	146	477	108	109
	11.8%	9.8%	13.0%	14.5%	12.1%	13.5%	7.1%	10.9%
6	1,174	163	113	82	94	544	122	60
	9.2%	7.1%	9.4%	4.1%	7.8%	15.4%	8.0%	6.0%
7	1,034	189	90	92	90	480	52	42
	8.1%	8.2%	7.5%	4.6%	7.4%	13.6%	3.4%	4.2%
8	1,085	200	109	138	116	445	55	17
	8.5%	8.7%	9.1%	6.9%	9.6%	12.6%	3.6%	1.7%
9	689	124	139	108	97	194	17	8
	5.4%	5.4%	11.6%	5.4%	8.0%	5.5%	1.1%	0.8%
People should provide	1,047	92	148	266	115	357	58	10
for themselves	8.2%	4.0%	12.3%	13.3%	9.5%	10.1%	3.8%	1.0%
No answer	140	117	0	2	23	0	0	1
	1.1%	5.1%	0.0%	0.1%	1.9%	0.0%	0.0%	0.1%
Don't know	166	39	1	10	28	49	0	43
	1.3%	1.7%	0.1%	0.5%	2.3%	1.4%	0.0%	4.3%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	4.75	4.65	5.56	4.58	5.18	5.77	3.04	2.79
Standard Deviation	2.99	2.65	3.03	3.3	3	2.7	2.58	2.25
Base mean	12.454	2.145	1.201	1.987	1.16	3.482	1.523	956

Table 36. Summary Statistics: Competition Good or Harmful

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Competition is good. It	3,664	327	298	824	340	544	769	560
stimulates people to work.	28.7%	14.2%	24.8%	41.2%	28.1%	15.4%	50.5%	56.0%
2	1,417	384	189	164	121	208	210	149
	11.1%	16.7%	15.7%	8.2%	10.0%	5.9%	13.8%	14.9%
3	1,404	462	153	162	127	233	204	63
	11.0%	20.1%	12.7%	8.1%	10.5%	6.6%	13.4%	6.3%
4	1,098	306	114	132	161	272	72	40
	8.6%	13.3%	9.5%	6.6%	13.3%	7.7%	4.7%	4.0%
5	1,609	274	155	254	173	551	139	59
	12.6%	11.9%	12.9%	12.7%	14.3%	15.6%	9.1%	5.9%
6	945	182	79	72	75	473	55	16
	7.4%	7.9%	6.6%	3.6%	6.2%	13.4%	3.6%	1.6%
7	677	62	70	50	39	406	35	10
	5.3%	2.7%	5.8%	2.5%	3.2%	11.5%	2.3%	1.0%
8	689	90	63	96	44	364	18	13
	5.4%	3.9%	5.2%	4.8%	3.6%	10.3%	1.2%	1.3%
9	370	41	48	50	36	177	12	5
	2.9%	1.8%	4.0%	2.5%	3.0%	5.0%	0.8%	0.5%
Competition is bad. It brings	523	18	31	184	44	233	9	2
out the worst in people	4.1%	0.8%	2.6%	9.2%	3.6%	6.6%	0.6%	0.2%
No answer	140	115	0	2	13	0	0	4
	1.1%	5.0%	0.0%	0.1%	1.1%	0.0%	0.0%	0.4%
Don't know	243	39	2	12	35	71	0	79
	1.9%	1.7%	0.2%	0.6%	2.9%	2.0%	0.0%	7.9%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	3.84	3.67	3.81	3.65	3.72	5.21	2.43	2
Std.Dev	2.7	2.1	2.58	3.04	2.56	2.72	1.96	1.7
Base mean	12.389	2.145	1.199	1.985	1.161	3.459	1.523	917

Table 37. Summary Statistics: Confidence in Labor Unions

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
A great deal	906	191	70	80	48	427	70	15
	7.1%	8.3%	5.8%	4.0%	4.0%	12.1%	4.6%	1.5%
Quite a lot	3,013	748	272	388	163	1,031	315	98
	23.6%	32.5%	22.6%	19.4%	13.5%	29.2%	20.7%	9.8%
Not very much	3,881	400	490	720	440	1,109	510	215
	30.4%	17.4%	40.8%	36.0%	36.4%	31.4%	33.5%	21.5%
None at all	3,204	94	363	788	499	681	592	183
	25.1%	4.1%	30.2%	39.4%	41.2%	19.3%	38.9%	18.3%
No answer	179	124	0	2	15	0	37	0
	1.4%	5.4%	0.0%	0.1%	1.2%	0.0%	2.4%	0.0%
Don't know	1,583	745	6	24	45	282	0	489
	12.4%	32.4%	0.5%	1.2%	3.7%	8.0%	0.0%	48.9%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 38. Summary Statistics: Confidence in Major Companies

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
A great deal	1,609	216	163	356	111	561	154	40
	12.6%	9.4%	13.6%	17.8%	9.2%	15.9%	10.1%	4.0%
Quite a lot	4,417	1,014	469	726	350	1,155	541	162
	34.6%	44.1%	39.0%	36.3%	28.9%	32.7%	35.5%	16.2%
Not very much	3,702	561	405	626	420	1,073	410	205
	29.0%	24.4%	33.7%	31.3%	34.7%	30.4%	26.9%	20.5%
None at all	1,902	51	160	282	292	533	407	177
	14.9%	2.2%	13.3%	14.1%	24.1%	15.1%	26.7%	17.7%
No answer	153	127	0	0	11	0	11	0
	1.2%	5.5%	0.0%	0.0%	0.9%	0.0%	0.7%	0.0%
Don't know	996	331	4	8	27	212	0	416
	7.8%	14.4%	0.3%	0.4%	2.2%	6.0%	0.0%	41.6%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 39. Summary Statistics: Confidence in the Government

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
A great deal	2,068	867	231	200	41	512	120	91
	16.2%	37.7%	19.2%	10.0%	3.4%	14.5%	7.9%	9.1%
Quite a lot	4,034	1,079	375	574	223	1,112	484	184
	31.6%	46.9%	31.2%	28.7%	18.4%	31.5%	31.8%	18.4%
Not very much	3,613	143	379	700	483	1,084	465	353
	28.3%	6.2%	31.5%	35.0%	39.9%	30.7%	30.5%	35.3%
None at all	2,630	23	214	520	442	689	451	296
	20.6%	1.0%	17.8%	26.0%	36.5%	19.5%	29.6%	29.6%
No answer	128	122	1	0	4	0	3	0
	1.0%	5.3%	0.1%	0.0%	0.3%	0.0%	0.2%	0.0%
Don't know	306	69	2	4	18	131	0	76
	2.4%	3.0%	0.2%	0.2%	1.5%	3.7%	0.0%	7.6%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 40. Summary Statistics: Confidence in the Civil Services

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
A great deal	1047	382	48	56	33	434	73	11
	8.2%	16.6%	4.0%	2.8%	2.7%	12.3%	4.8%	1.1%
Quite a lot	3434	1129	237	364	145	1052	420	94
	26.9%	49.1%	19.7%	18.2%	12.0%	29.8%	27.6%	9.4%
Not very much	4085	403	465	712	440	1172	466	421
	32.0%	17.5%	38.7%	35.6%	36.4%	33.2%	30.6%	42.1%
None at all	3421	28	450	840	570	664	548	331
	26.8%	1.2%	37.4%	42.0%	47.1%	18.8%	36.0%	33.1%
No answer	153	127	0	4	8	0	15	0
	1.2%	5.5%	0.0%	0.2%	0.7%	0.0%	1.0%	0.0%
Dont know	626	232	2	24	13	208	0	143
	4.9%	10.1%	0.2%	1.2%	1.1%	5.9%	0.0%	14.3%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 41. Summary Statistics: Vote in Local Elections [14]

	Total	China	Mexico	Peru	S. Africa	Egypt	Yemen
Always	6,651	623	779	1,784	622	1,730	708
	52.1%	27.1%	64.8%	89.2%	51.4%	49.0%	46.5%
Usually	2,681	476	254	92	296	1,109	201
	21.0%	20.7%	21.1%	4.6%	24.5%	31.4%	13.2%
Never	2,796	941	162	74	255	692	361
	21.9%	40.9%	13.5%	3.7%	21.1%	19.6%	23.7%
Not applicable	13	0	0	0	0	0	23
	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%
No answer	166	131	5	26	0	0	0
	1.3%	5.7%	0.4%	1.3%	0.0%	0.0%	0.0%
Don't know	447	129	2	24	36	0	230
	3.5%	5.6%	0.2%	1.2%	3.0%	0.0%	15.1%
Observations	11,564	2,300	2,000	1,210	3,531	1,523	1,000

[14] I do not report the summary statistics of the variables related to voting behavior for Ecuador because it was not included in the questionnaire in Ecuador.

Table 42. Summary Statistics: Vote in National Elections

	Total	China	Mexico	Peru	S. Africa	Egypt	Yemen
Always	6,243	147	808	1,752	653	1,628	746
	48.9%	6.4%	67.2%	87.6%	54.0%	46.1%	49.0%
Usually	2,183	145	220	84	283	1,010	225
	17.1%	6.3%	18.3%	4.2%	23.4%	28.6%	14.8%
Never	3,728	1,718	167	88	237	893	376
	29.2%	74.7%	13.9%	4.4%	19.6%	25.3%	24.7%
Not applicable;	13	0	4	0	0	0	9
	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.6%
No answer	191	143	0	52	0	0	0
	1.5%	6.2%	0.0%	2.6%	0.0%	0.0%	0.0%
Don't know	421	145	2	24	35	0	166
	3.3%	6.3%	0.2%	1.2%	2.9%	0.0%	10.9%
Observations	11,564	2,300	2,000	1,210	3,531	1,523	1,000

Table 43. Summary Statistics: Political Action: Signing a Petition

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Have done	1,226	104	123	366	166	399	27	45
	9.6%	4.5%	10.2%	18.3%	13.7%	11.3%	1.8%	4.5%
Might do	3,881	867	276	782	507	1,257	38	157
	30.4%	37.7%	23.0%	39.1%	41.9%	35.6%	2.5%	15.7%
Would never do	6,843	1,228	802	840	438	1,508	1,459	567
	53.6%	53.4%	66.7%	42.0%	36.2%	42.7%	95.8%	56.7%
No answer	115	92	0	2	25	0	0	0
	0.9%	4.0%	0.0%	0.1%	2.1%	0.0%	0.0%	0.0%
Don't know	689	12	1	10	73	367	0	231
	5.4%	0.5%	0.1%	0.5%	6.0%	10.4%	0.0%	23.1%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 44. Summary Statistics: Political Action: Attending Peaceful/lawful Demonstrations

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Have done	1085	39	89	204	171	318	104	158
	8.5%	1.7%	7.4%	10.2%	14.1%	9.0%	6.8%	15.8%
Might do	3651	660	243	808	525	1186	58	167
	28.6%	28.7%	20.2%	40.4%	43.4%	33.6%	3.8%	16.7%
Would never do	7392	1497	870	976	440	1702	1362	546
	57.9%	65.1%	72.4%	48.8%	36.4%	48.2%	89.4%	54.6%
No answer	115	92	0	0	27	0	0	0
	0.9%	4.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%
Dont know	523	12	0	10	47	325	0	129
	4.1%	0.5%	0.0%	0.5%	3.9%	9.2%	0.0%	12.9%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 45. Summary Statistics: Active/Inactive Membership: Political Party

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Not a member	10,328	2,139	1,139	1,634	1,145	1,963	1,502	801
	80.9%	93.0%	94.8%	81.7%	94.6%	55.6%	98.6%	80.1%
Inactive member	1,660	124	29	204	36	1,126	6	134
	13.0%	5.4%	2.4%	10.2%	3.0%	31.9%	0.4%	13.4%
Active member	779	35	34	164	22	441	14	65
	6.1%	1.5%	2.8%	8.2%	1.8%	12.5%	0.9%	6.5%
No answer	13	2	0	0	7	0	0	0
	0.1%	0.1%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%
Don't know	0	0	0	0	1	0	0	0
	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 46. Summary Statistics: Practice Religion

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
More than once a week	1,800	9	138	260	113	632	228	423
	14.1%	0.4%	11.5%	13.0%	9.3%	17.9%	15.0%	42.3%
Once a week	3,485	35	450	664	368	1,419	460	87
	27.3%	1.5%	37.4%	33.2%	30.4%	40.2%	30.2%	8.7%
Once a month	1,302	23	244	320	234	385	90	13
	10.2%	1.0%	20.3%	16.0%	19.3%	10.9%	5.9%	1.3%
Only on special holy days	983	115	113	232	23	233	231	39
	7.7%	5.0%	9.4%	11.6%	1.9%	6.6%	15.2%	3.9%
Once a year	294	39	37	102	41	39	6	27
	2.3%	1.7%	3.1%	5.1%	3.4%	1.1%	0.4%	2.7%
Less often	1,034	108	114	152	215	395	34	13
	8.1%	4.7%	9.5%	7.6%	17.8%	11.2%	2.2%	1.3%
Never, practically never	3,536	1,914	105	264	178	226	474	381
	27.7%	83.2%	8.7%	13.2%	14.7%	6.4%	31.1%	38.1%
No answer	102	53	1	4	33	0	0	17
	0.8%	2.3%	0.1%	0.2%	2.7%	0.0%	0.0%	1.7%
Don't know	217	5	0	0	7	205	0	0
	1.7%	0.2%	0.0%	0.0%	0.6%	5.8%	0.0%	0.0%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 47. Summary Statistics: Patriotism: Willingness to Fight for Your Country

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Yes	8,055	1,707	802	1,436	692	1,667	996	760
	63.1%	74.2%	66.7%	71.8%	57.2%	47.2%	65.4%	76.0%
No	3,766	449	398	530	361	1,282	527	225
	29.5%	19.5%	33.1%	26.5%	29.8%	36.3%	34.6%	22.5%
No answer	153	71	1	10	56	0	0	15
	1.2%	3.1%	0.1%	0.5%	4.6%	0.0%	0.0%	1.5%
Don't know; Unsure	791	76	1	26	100	583	0	0
	6.2%	3.3%	0.1%	1.3%	8.3%	16.5%	0.0%	0.0%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000

Table 48. Summary Statistics: Tax Morale: Is Cheating on Taxes Justifiable

	Total	China	Ecuador	Mexico	Peru	S. Africa	Egypt	Yemen
Never justifiable	6,574	998	749	1,418	676	1,225	924	582
	51.5%	43.4%	62.3%	70.9%	55.9%	34.7%	60.7%	58.2%
2	1,570	343	196	136	202	318	309	68
	12.3%	14.9%	16.3%	6.8%	16.7%	9.0%	20.3%	6.8%
3	1,047	237	105	94	133	258	171	47
	8.2%	10.3%	8.7%	4.7%	11.0%	7.3%	11.2%	4.7%
4	523	94	41	64	53	201	49	23
	4.1%	4.1%	3.4%	3.2%	4.4%	5.7%	3.2%	2.3%
5	574	71	56	82	41	261	14	42
	4.5%	3.1%	4.7%	4.1%	3.4%	7.4%	0.9%	4.2%
6	498	53	30	36	15	318	17	28
	3.9%	2.3%	2.5%	1.8%	1.2%	9.0%	1.1%	2.8%
7	434	35	10	40	16	297	11	23
	3.4%	1.5%	0.8%	2.0%	1.3%	8.4%	0.7%	2.3%
8	332	28	6	36	6	233	9	20
	2.6%	1.2%	0.5%	1.8%	0.5%	6.6%	0.6%	2.0%
9	281	12	5	30	10	205	11	11
	2.2%	0.5%	0.4%	1.5%	0.8%	5.8%	0.7%	1.1%
Always justifiable	268	14	5	62	10	159	9	15
	2.1%	0.6%	0.4%	3.1%	0.8%	4.5%	0.6%	1.5%
No answer	345	322	0	0	22	0	0	0
	2.7%	14.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%
Don't know	319	92	0	4	27	56	0	141
	2.5%	4.0%	0.0%	0.2%	2.2%	1.6%	0.0%	14.1%
Observations	12,766	2,300	1,202	2,000	1,210	3,531	1,523	1,000
Mean	2.62	2.21	1.91	2.16	2	4.04	1.81	2.21
Std.Dev	2.44	1.84	1.59	2.32	1.69	3	1.47	2.24
Base mean	12.099	1.885	1.202	1.995	1.162	3.473	1.523	859

APPENDIX C

WITHIN-COUNTRY REGRESSION RESULTS IN THE SECOND CHAPTER[15]

Estimated Results for China

Table 49. Estimated Results for China: Demographics.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Education (Attended University)	coeff.	-0.723***			-0.665***	-0.474***
	mar.eff.	-0.213			-0.192	-0.141
	p value	(0.000)			(0.000)	(0.000)
Employment Status (Full Time)	coeff.		-0.230***		-0.148*	-0.795***
	mar.eff.		-0.079		-0.050	-0.262
	p value		(0.005)		(0.077)	(0.000)
Nature of Task (non-manual)	coeff.			-1.017***		
	mar.eff.			-0.337		
	p value			(0.000)		
Scales of Income (High Income)	coeff.	-0.565***	-0.327*	-0.006	-0.114	0.073
	mar.eff.	-0.193	-0.110	-0.002	-0.038	0.024
	p value	(0.001)	(0.094)	(0.976)	(0.567)	(0.721)
Sex (Male)	coeff.	-0.116	0.009	-0.014	0.013	-0.001
	mar.eff.	-0.039	0.003	-0.004	0.004	-0.0004
	p value	(0.105)	(0.904)	(0.854)	(0.862)	(0.986)
Middle Age (29-50)	coeff.	0.186**	0.212***	0.161**	0.264***	0.208**
	mar.eff.	0.063	0.071	0.053	0.087	0.068
	p value	(0.019)	(0.010)	(0.046)	(0.002)	(0.011)
Marital Status (Married)	coeff.	-0.236***	0.138	0.181	0.057	0.115
	mar.eff.	-0.084	0.045	0.057	0.018	0.037
	p value	(0.009)	(0.242)	(0.140)	(0.631)	(0.351)
Social Class (White Collar)	coeff.	-0.018	-0.204	-0.013	-0.116	0.027
	mar.eff.	-0.006	-0.065	-0.004	-0.037	0.009
	p value	(0.917)	(0.249)	(0.941)	(0.522)	(0.883)
Observations		1,261	1,261	1,230	1,261	1,230
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

[15]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.

Table 50. Estimated Results for China: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	0.030				0.059
	mar.eff.	0.010				0.020
	p value	(0.815)				(0.696)
Against Private Ownership	coeff.		-0.250*			-0.275*
	mar.eff.		-0.086			-0.094
	p value		(0.092)			(0.068)
Belief in Government Delivery	coeff.			0.138		0.117
	mar.eff.			0.047		0.040
	p value			(0.311)		0.467
Competition is Bad	coeff.				0.308*	0.341*
	mar.eff.				0.106	0.117
	p value				(0.070)	(0.053)
Observations		1,156	1,100	1,153	1,153	1,094
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 51. Estimated Results for China: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	0.402**				0.228
	mar.eff.	0.130				0.073
	p value	(0.034)				(0.301)
Confidence in Major Companies	coeff.		0.284			0.377
	mar.eff.		0.097			0.121
	p value		(0.131)			(0.147)
Confidence in Government	coeff.			0.134		0.058
	mar.eff.			0.046		0.018
	p value			(0.460)		(0.826)
Confidence in Civil Services	coeff.				0.534***	0.413
	mar.eff.				0.181	0.133
	p value				(0.004)	(0.149)
Observations		849	1,024	1,132	1,078	780
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 52. Estimated Results for China: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Always Vote in Local Elections	coeff.	0.083					0.116	
	mar.eff.	0.028					0.039	
	p value	(0.364)					(0.227)	
Always Vote in National Elections	coeff.		-0.256					-0.169
	mar.eff.		-0.079					-0.054
	p value		(0.113)					(0.345)
Signing a Petition	coeff.			0.037			0.156	0.166
	mar.eff.			0.013			0.055	0.058
	p value			(0.840)			(0.464)	(0.438)
Engaging in Demonstration	coeff.				0.284		0.378	0.372
	mar.eff.				0.104		0.139	0.137
	p value				(0.314)		(0.267)	(0.274)
Active Political Membership	coeff.					-0.557***	-0.666***	-0.656***
	mar.eff.					-0.160	-0.186	-0.184
	p value					(0.000)	(0.000)	(0.000)
Observations		1,118	1,107	1,175	1,175	1,260	1,037	1,026
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 53. Estimated Results for China: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	0.062			0.180	0.213
	mar.eff.	0.021			0.060	0.071
	p value	(0.778)			(0.448)	(0.377)
Patriotism	coeff.		-0.175*			-0.195*
	mar.eff.		-0.061			-0.067
	p value		(0.071)			(0.072)
Tax Morale	coeff.			-0.026	-0.014	-0.036
	mar.eff.			-0.008	-0.004	-0.012
	p value			(0.748)	(0.862)	(0.673)
Observations		1,224	1,179	1,034	1,015	979
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 54. Estimated Results for China: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Support for Government Involve.	coeff.	0.013	0.017	0.0187	0.018	0.018
	mar.eff.	0.004	0.005	0.005	0.005	0.005
	p value	(0.750)	(0.698)	(0.695)	(0.696)	(0.700)
Confidence in Market institution	coeff.	0.171***	0.187***	0.155***	0.155***	0.147***
	mar.eff.	0.056	0.061	0.048	0.048	0.045
	p value	(0.000)	(0.000)	(0.004)	(0.005)	(0.007)
Confidence in Governmental Insti.	coeff.	-0.540***	-0.286	0.033	0.032	-0.007
	mar.eff.	-0.176	-0.093	0.010	0.010	-0.002
	p value	(0.001)	(0.121)	(0.869)	(0.877)	(0.972)
Political participation	coeff.	0.021	0.035	0.077**	0.077**	0.074*
	mar.eff.	0.006	0.011	0.024	0.024	0.023
	p value	(0.606)	(0.414)	(0.080)	(0.080)	(0.095)
Individual Norms	coeff.	-0.024	-0.037	-0.030	-0.030	-0.035
	mar.eff.	-0.007	-0.012	-0.009	-0.009	-0.011
	p value	(0.630)	(0.474)	(0.582)	(0.584)	(0.521)
Education (Attended University)	coeff.					-0.409**
	mar.eff.					-0.117
	p value					(0.018)
Employment Status (Full Time)	coeff.				0.003	0.033
	mar.eff.				0.001	0.010
	p value				(0.978)	(0.795)
Nature of Task (non-manual)	coeff.			-1.309***	-1.309***	-1.127***
	mar.eff.			-0.410	-0.410	-0.350
	p value			(0.000)	(0.000)	(0.000)
Scales of Income (High Income)	coeff.		-0.578**	0.018	0.017	0.123
	mar.eff.		-0.189	0.005	0.005	0.038
	p value		(0.028)	(0.950)	(0.952)	(0.675)
Observations		680	616	599	599	599
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Estimated Results for Ecuador

Table 55. Estimated Results for Ecuador: Demographics.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Education (Attended University)	coeff.	-0.485***			-0.405***	-0.336***
	mar.eff.	-0.191			-0.160	-0.133
	p value	(0.000)			(0.001)	(0.004)
Employment Status (Full Time)	coeff.		-1.497***		-1.480***	
	mar.eff.		0.031		-0.539	
	p value		(0.000)		(0.000)	
Nature of Task (non-manual)	coeff.			-0.948***		-0.813***
	mar.eff.			-0.380		-0.323
	p value			(0.000)		(0.000)
Scales of Income (High Income)	coeff.	-0.332	-0.184	-0.105	-0.057	-0.056
	mar.eff.	-0.132	-0.073	-0.042	-0.022	-0.022
	p value	(0.162)	90.476)	(0.666)	(0.827)	(0.819)
Sex (Male)	coeff.	-0.249***	0.031	-0.220**	0.023	-0.228
	mar.eff.	-0.098	0.012	-0.087	0.009	-0.090
	p value	(0.010)	(0.774)	(0.024)	(0.830)	(0.020)
Middle Age (29-50)	coeff.	-0.013	0.051	-0.018	0.057	-0.013
	mar.eff.	-0.005	0.020	-0.007	0.022	-0.005
	p value	(0.892)	(0.626)	(0.846)	(0.586)	(0.890)
Marital Status (Married)	coeff.	0.173*	0.132	0.188*	0.110	0.173*
	mar.eff.	0.069	0.052	0.075	0.043	0.068
	p value	(0.075)	(0.216)	(0.055)	(0.305)	(0.079)
Social Class (White Collar)	coeff.	-0.140	-0.394**	-0.238	-0.261	-0.131
	mar.eff.	-0.056	-0.155	-0.094	-0.104	-0.052
	p value	(0.383)	(0.023)	(0.132)	(0.144)	(0.420)
Observations		735	735	733	735	733
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 56. Estimated Results for Ecuador: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	-0.058				-0.024
	mar.eff.	-0.023				-0.009
	p value	(0.663)				(0.867)
Against Private Ownership	coeff.		-0.063			-0.105
	mar.eff.		-0.025			-0.042
	p value		(0.679)			(0.504)
Belief in Government Delivery	coeff.			0.147		0.111
	mar.eff.			0.058		0.044
	p value			(0.285)		(0.443)
Competition is Bad	coeff.				0.314*	0.311*
	mar.eff.				0.125	0.123
	p value				(0.061)	(0.067)
Observations		734	731	735	734	729
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 57. Estimated Results for Ecuador: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	-0.098				-0.030
	mar.eff.	-0.039				-0.012
	p value	(0.545)				(0.865)
Confidence in Major Companies	coeff.		-0.083			-0.045
	mar.eff.		-0.033			-0.017
	p value		(0.604)			(0.787)
Confidence in Government	coeff.			-0.068		-0.010
	mar.eff.			-0.027		-0.004
	p value			(0.630)		(0.945)
Confidence in Civil Services	coeff.				-0.182	-0.144
	mar.eff.				-0.072	-0.057
	p value				(0.273)	(0.450)
Observations		730	734	734	733	727
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 58. Estimated Results for Ecuador: Political Participation.[16]

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Signing a Petition	coeff.	-0.200			-0.332**	0.521***
	mar.eff.	-0.079			-0.131	0.207
	p value	(0.182)			(0.045)	(0.001)
Engaging in Demonstration	coeff.		0.207		0.387**	0.326***
	mar.eff.		0.081		0.149	0.129
	p value		(0.241)		(0.049)	(0.002)
Active Political Membership	coeff.			-0.092	-0.135	0.018
	mar.eff.			-0.036	-0.053	0.007
	p value			(0.645)	(0.507)	(0.853)
Observations		734	735	735	734	732
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 59. Estimated Results for Ecuador: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)
Practice Religion	coeff.	-0.540***			0.540***
	mar.eff.	-0.215			0.215
	p value	(0.001)			(0.001)
Patriotism	coeff.		-0.339***		
	mar.eff.		-0.134		
	p value		(0.001)		
Tax Morale	coeff.			0.036	0.033
	mar.eff.			0.014	0.013
	p value			(0.708)	(0.733)
Observations		734	733	735	734
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)

[16]"Always vote in local elections" and "Always vote in national elections" are excluded because the questionnaire for Ecuador does not include the questions related to voting behavior

Table 60. Estimated Results for Ecuador: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Support for Government Involve.	coeff.	0.043	0.044	0.059	0.080*	0.080*
	mar.eff.	0.017	0.017	0.023	0.032	0.032
	p value	(0.262)	(0.256)	(0.137)	(0.064)	(0.067)
Confidence in Market institution	coeff.	-0.0508	-0.049	-0.046	-0.051	-0.062
	mar.eff.	-0.020	-0.019	-0.018	-0.020	-0.025
	p value	(0.241)	(0.250)	(0.293)	(0.281)	(0.193)
Confidence in Governmental Insti.	coeff.	0.037	0.062	0.117	0.215	0.238
	mar.eff.	0.014	0.024	0.046	0.086	0.095
	p value	(0.759)	(0.645)	(0.392)	(0.145)	(0.109)
Political participation	coeff.	-0.015	-0.014	-0.007	-0.032	-0.027
	mar.eff.	-0.006	-0.005	-0.002	-0.013	-0.011
	p value	(0.672)	90.708)	(0.852)	(0.449)	(0.526)
Individual Norms	coeff.	-0.122***	-0.121**	-0.128	-0.144***	-0.153***
	mar.eff.	-0.048	-0.048	-0.051	-0.057	-0.061
	p value	(0.010)	(0.011)	(0.009)	(0.007)	(0.004)
Education (Attended University)	coeff.					-0.304**
	mar.eff.					-0.120
	p value					(0.017)
Employment Status (Full Time)	coeff.				-1.365***	-1.361***
	mar.eff.				-0.505	-0.503
	p value				(0.000)	(0.000)
Nature of Task (non-manual)	coeff.			-0.873***	-0.590***	-0.472***
	mar.eff.			-0.348	-0.235	-0.188
	p value			(0.000)	(0.001)	(0.010)
Scales of Income (High Income)	coeff.		-0.081	0.382*	0.918***	0.975***
	mar.eff.		-0.032	0.152	0.366	0.389
	p value		(0.666)	(0.069)	(0.000)	(0.000)
Observations		721	721	719	719	719
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Estimated Results for Egypt

Table 61. Estimated Results for Egypt: Demographics.[17]

Dependent Variable: Informality		(1)	(2)	(3)
Education (Attended University)	coeff.	-0.701***		-0.349***
	mar.eff.	-0.267		-0.136
	p value	(0.000)		(0.008)
Employment Status (Full Time)	coeff.		-2.802***	-2.704***
	mar.eff.		-0.737	-0.731
	p value		(0.000)	(0.000)
Scales of Income (High Income)	coeff.	-0.044	0.120	0.169
	mar.eff.	-0.015	0.046	0.065
	p value	(0.831)	(0.589)	(0.451)
Sex (Male)	coeff.	-2.158***	-2.086***	-2.084***
	mar.eff.	-0.718	-0.700	-0.700
	p value	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	coeff.	-0.385***	-0.346***	-0.352***
	mar.eff.	-0.139	-0.133	-0.135
	p value	(0.000)	(0.000)	(0.000)
Marital Status (Married)	coeff.	-0.380***	-0.291***	-0.320***
	mar.eff.	-0.139	-0.109	-0.119
	p value	(0.000)	0.006	(0.003)
Social Class (White Collar)	coeff.	-0.264*	-0.290*	-0.185
	mar.eff.	-0.098	-0.113	-0.072
	p value	(0.063)	(0.058)	(0.246)
Observations		1,523	1,523	1,523
$Prob > chi2$		(0.000)	(0.000)	(0.000)

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

Table 62. Estimated Results for Egypt: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	-0.020				0.004
	mar.eff.	-0.007				0.001
	p value	(0.859)				(0.970)
Against Private Ownership	coeff.		0.079			0.080
	mar.eff.		0.028			0.029
	p value		(0.504)			(0.505)
Belief in Government Delivery	coeff.			0.102		0.094
	mar.eff.			0.037		0.034
	p value			(0.466)		(0.519)
Competition is Bad	coeff.				0.094	0.059
	mar.eff.				0.034	0.021
	p value				(0.600)	(0.750)
Observations		1,523	1,523	1,523	1,523	1,523
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 63. Estimated Results for Egypt: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	-0.214				-0.387**
	mar.eff.	-0.078				-0.141
	p value	(0.125)				(0.020)
Confidence in Major Companies	coeff.		0.032			0.034
	mar.eff.		0.011			0.012
	p value		(0.801)			(0.813)
Confidence in Government	coeff.			0.304**		0.384***
	mar.eff.			0.110		0.140
	p value			(0.018)		(0.006)
Confidence in Civil Services	coeff.				0.090	0.161
	mar.eff.				0.032	0.059
	p value				(0.499)	(0.340)
Observations		1,470	1,506	1,520	1,501	1,458
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 64. Estimated Results for Egypt: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Always Vote in Local Elections	coeff.	-0.426***					-0.403***	
	mar.eff.	-0.154					-0.146	
	p value	(0.000)					(0.000)	
Always Vote in National Elections	coeff.		-0.375***					-0.355***
	mar.eff.		-0.136					-0.129
	p value		(0.000)					(0.000)
Signing a Petition	coeff.			-0.441			-0.232	-0.271
	mar.eff.			-0.170			-0.087	-0.102
	p value			(0.191)			(0.508)	(0.434)
Engaging in Demonstration	coeff.				-0.347		-0.143	-0.189
	mar.eff.				-0.132		-0.053	-0.070
	p value				(0.114)		(0.526)	(0.402)
Active Political Membership	coeff.					-0.695*	-0.510	-0.547
	mar.eff.					-0.270	-0.197	-0.211
	p value					(0.064)	(0.183)	(0.153)
Observations		1,523	1,523	1,523	1,523	1,523	1,523	1,523
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 65. Estimated Results for Egypt: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	-0.276***			-0.269**	-0.268**
	mar.eff.	-0.100			-0.097	-0.097
	p value	(0.009)			(0.011)	(0.011)
Patriotism	coeff.		-0.031			-0.016
	mar.eff.		-0.011			-0.005
	p value		(0.708)			(0.846)
Tax Morale	coeff.			-0.114	-0.103	-0.102
	mar.eff.			-0.041	-0.037	-0.036
	p value			(0.169)	(0.216)	(0.221)
Observations		1,523	1,523	1,523	1,523	1,523
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 66. Estimated Results for Egypt: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)
Support for Government Involve.	coeff.	0.015	-0.034	0.017	0.018
	mar.eff.	0.005	-0.013	0.007	0.007
	p value	(0.667)	(0.339)	(0.663)	(0.646)
Confidence in Market institution	coeff.	-0.118***	-0.116***	-0.093**	-0.093**
	mar.eff.	-0.046	-0.044	-0.036	-0.036
	p value	(0.001)	(0.001)	(0.021)	(0.021)
Confidence in Governmental Insti.	coeff.	1.350***	1.108***	1.251***	1.252***
	mar.eff.	0.524	0.424	0.493	0.494
	p value	(0.000)	(0.000)	(0.000)	(0.000)
Political participation	coeff.	-0.198***	-0.191***	-0.167***	-0.168***
	mar.eff.	-0.077	-0.073	-0.066	-0.066
	p value	(0.000)	(0.000)	(0.000)	(0.000)
Individual Norms	coeff.	-0.110***	-0.101**	-0.073	-0.073
	mar.eff.	-0.043	-0.038	-0.029	-0.029
	p value	0.007	(0.015)	(0.112)	(0.110)
Education (Attended University)	coeff.				0.040
	mar.eff.				0.015
	p value				(0.761)
Employment Status (Full Time)	coeff.			-2.751***	-2.763***
	mar.eff.			-0.701	-0.702
	p value			(0.000)	(0.000)
Scales of Income (High Income)	coeff.		1.083***	1.394***	1.379***
	mar.eff.		0.415	0.550	0.544
	p value		(0.000)	(0.000)	(0.000)
Observations		1,460	1,460	1,460	1,460
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)

Estimated Results for Mexico

Table 67. Estimated Results for Mexico: Demographics.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Education (Attended University)	coeff.	-0.506***			-0.539***	-0.408***
	mar.eff.	-0.171			-0.179	-0.140
	p value	(0.000)			(0.000)	(0.000)
Employment Status (Full Time)	coeff.		-0.616***		-0.636***	
	mar.eff.		-0.210		-0.214	
	p value		(0.000)		(0.000)	
Nature of Task (non-manual)	coeff.			-0.512***		-0.387***
	mar.eff.			-0.188		-0.142
	p value			(0.000)		(0.000)
Scales of Income (High Income)	coeff.	-0.488***	-0.620***	-0.526***	-0.436***	-0.421***
	mar.eff.	-0.179	-0.227	-0.193	-0.159	-0.154
	p value	(0.000)	(0.000)	(0.000)	(0.001)	(0.002)
Sex (Male)	coeff.	0.230***	0.322***	0.208***	0.343***	0.221***
	mar.eff.	0.084	0.116	0.076	0.123	0.080
	p value	(0.001)	(0.000)	(0.002)	(0.000)	(0.001)
Middle Age (29-50)	coeff.	-0.0001	0.045	-0.013	0.057	-0.004
	mar.eff.	-0.000	0.016	-0.005	0.020	-0.001
	p value	(0.999)	(0.504)	(0.837)	(0.400)	(0.944)
Marital Status (Married)	coeff.	0.090	0.156**	0.102	0.112	0.071
	mar.eff.	0.033	0.056	0.037	0.040	0.026
	p value	(0.196)	(0.026)	(0.144)	(0.114)	(0.311)
Social Class (White Collar)	coeff.	0.074	0.045	0.056	0.087	0.080
	mar.eff.	0.027	0.016	0.021	0.032	0.029
	p value	(0.376)	(0.585)	(0.497)	(0.301)	(0.339)
Observations		1,621	1,618	1,618	1,617	1,617
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 68. Estimated Results for Mexico: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	-0.070				-0.021
	mar.eff.	-0.026				-0.007
	p value	(0.419)				(0.814)
Against Private Ownership	coeff.		0.056*			0.036
	mar.eff.		0.020			0.013
	p value		(0.052)			(0.701)
Belief in Government Delivery	coeff.			0.223**		0.208**
	mar.eff.			0.082		0.076
	p value			(0.012)		0.024
Competition is Bad	coeff.				0.112	0.039
	mar.eff.				0.041	0.014
	p value				(0.240)	(0.695)
Observations		1,615	1,584	1,613	1,613	1,577
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 69. Estimated Results for Mexico: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	-0.320***				-0.277**
	mar.eff.	-0.118				-0.101
	p value	(0.005)				(0.028)
Confidence in Major Companies	coeff.		-0.339***			-0.316***
	mar.eff.		-0.125			-0.116
	p value		(0.001)			(0.005)
Confidence in Government	coeff.			-0.028		0.131
	mar.eff.			-0.010		0.048
	p value			(0.781)		(0.275)
Confidence in Civil Services	coeff.				-0.145	0.004
	mar.eff.				-0.053	0.001
	p value				(0.213)	(0.971)
Observations		1,605	1,617	1,620	1,605	1,588
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 70. Estimated Results for Mexico: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Always Vote in Local Elections	coeff.	0.095					0.103	
	mar.eff.	0.035					0.037	
	p value	(0.166)					(0.146)	
Always Vote in National Elections	coeff.		0.074					0.082
	mar.eff.		0.027					0.030
	p value		(0.288)					(0.255)
Signing a Petition	coeff.			-0.011*			0.008	0.008
	mar.eff.			-0.004			0.003	0.002
	p value			(0.084)			(0.921)	(0.927)
Engaging in Demonstration	coeff.				-0.171**		-0.190*	-0.187
	mar.eff.				-0.061		-0.067	-0.067
	p value				(0.012)		(0.098)	(0.103)
Active Political Membership	coeff.					0.078	0.079	0.084
	mar.eff.					0.029	0.029	0.031
	p value					(0.349)	(0.355)	(0.329)
Observations		1,613	1,614	1,612	1,612	1,622	1,594	1,595
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 71. Estimated Results for Mexico: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	-0.431***			-0.431***	-0.454***
	mar.eff.	-0.159			-0.158	-0.166
	p value	(0.000)			(0.000)	(0.000)
Patriotism	coeff.		-0.052			-0.046
	mar.eff.		-0.019			-0.017
	p value		(0.486)			(0.540)
Tax Morale	coeff.			-0.020	-0.023028	-0.039
	mar.eff.			-0.007	-0.0084851	-0.014
	p value			(0.768)	0.747	(0.587)
Observations		1,619	1,599	1,618	1,615	1,592
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 72. Estimated Results for Mexico: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Support for Government Involve.	coeff.	0.051*	0.059**	0.061**	0.062**	0.052**
	mar.eff.	0.019	0.022	0.022	0.022	0.019
	p value	(0.062)	(0.035)	(0.029)	(0.031)	(0.070)
Confidence in Market institution	coeff.	-0.086***	-0.099***	-0.096***	-0.097***	-0.094***
	mar.eff.	-0.032	-0.037	-0.035	-0.035	-0.034
	p value	(0.005)	(0.002)	(0.003)	(0.003)	(0.004)
Confidence in Governmental Insti.	coeff.	0.313***	0.195**	0.103	0.074	0.056
	mar.eff.	0.118	0.073	0.038	0.027	0.020
	p value	(0.001)	(0.049)	(0.307)	(0.468)	(0.585)
Political participation	coeff.	-0.042*	-0.039*	-0.048**	-0.033	-0.047*
	mar.eff.	-0.016	-0.014	-0.018	-0.012	-0.017
	p value	(0.073)	(0.099)	(0.045)	(0.175)	(0.062)
Individual Norms	coeff.	-0.096***	-0.090***	-0.080**	-0.080**	-0.079**
	mar.eff.	-0.036	-0.034	-0.029	-0.029	-0.029
	p value	(0.004)	(0.007)	(0.019)	(0.021)	(0.024)
Education (Attended University)	coeff.					-0.462***
	mar.eff.					-0.156
	p value					(0.000)
Employment Status (Full Time)	coeff.				-0.620***	-0.635***
	mar.eff.				-0.212	-0.216
	p value				(0.000)	(0.000)
Nature of Task (non-manual)	coeff.			-0.575***	-0.544***	-0.406***
	mar.eff.			-0.213	-0.200	-0.148
	p value			(0.000)	(0.000)	(0.000)
Scales of Income (High Income)	coeff.		-0.843***	-0.641***	-0.601***	-0.479***
	mar.eff.		-0.316	-0.238	-0.221	-0.175
	p value		(0.000)	(0.000)	(0.000)	(0.001)
Observations		1,585	1,537	1,533	1,529	1,528
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Estimated Results for Peru

Table 73. Estimated Results for Peru: Demographics.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Education (Attended University)	coeff.	-0.279***			-0.291***	-0.346***
	mar.eff.	-0.092			-0.089	-0.099
	p value	(0.006)			(0.007)	(0.005)
Employment Status (Full Time)	coeff.		-1.269***		-1.274***	
	mar.eff.		-0.327		-0.326	
	p value		(0.000)		(0.000)	
Nature of Task (non-manual)	coeff.			-0.492***		-0.358**
	mar.eff.			-0.152		-0.110
	p value			(0.000)		(0.014)
Scales of Income (High Income)	coeff.	-0.541***	-0.502**	-0.767***	-0.431**	-0.726***
	mar.eff.	-0.186	-0.162	-0.238	-0.139	-0.224
	p value	(0.008)	(0.018)	(0.001)	(0.045)	(0.001)
Sex (Male)	coeff.	-0.234***	-0.131	-0.168*	-0.120	-0.169*
	mar.eff.	-0.080	-0.042	-0.052	-0.038	-0.052
	p value	(0.003)	(0.118)	(0.051)	(0.152)	(0.051)
Middle Age (29-50)	coeff.	-0.446***	-0.296***	-0.314***	-0.305***	-0.325***
	mar.eff.	-0.149	-0.094	-0.095	-0.096	-0.098
	p value	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)
Marital Status (Married)	coeff.	-0.139	-0.134	0.009	-0.189**	-0.027
	mar.eff.	-0.048	-0.043	0.003	-0.061	-0.008
	p value	0.101	(0.124)	(0.914)	(0.036)	(0.768)
Social Class (White Collar)	coeff.	-0.132	-0.084	-0.269**	-0.036	-0.225*
	mar.eff.	-0.044	-0.027	-0.078	-0.011	-0.066
	p value	(0.216)	(0.455)	(0.029)	(0.754)	(0.071)
Observations		1,158	1,158	1,063	1,158	1,063
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 74. Estimated Results for Peru: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	0.183				0.152
	mar.eff.	0.062				0.051
	p value	(0.146)				(0.268)
Against Private Ownership	coeff.		0.303**			0.277**
	mar.eff.		0.103			0.093
	p value		(0.021)			(0.045)
Belief in Government Delivery	coeff.			0.072		0.0001
	mar.eff.			0.024		0.000
	p value			(0.552)		(0.999)
Competition is Bad	coeff.				0.283**	0.316**
	mar.eff.				0.096	0.106
	p value				(0.045)	(0.033)
Observations		1,118	1,095	1,121	1,120	1,073
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 75. Estimated Results for Peru: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	0.061				0.087
	mar.eff.	0.021				0.029
	p value	(0.672)				(0.594)
Confidence in Major Companies	coeff.		-0.239**			-0.317**
	mar.eff.		-0.082			-0.108
	p value		(0.067)			(0.036)
Confidence in Government	coeff.			-0.044		-0.056
	mar.eff.			-0.015		-0.019
	p value			(0.754)		(0.752)
Confidence in Civil Services	coeff.				0.139	0.355**
	mar.eff.				0.047	0.120
	p value				(0.356)	(0.059)
Observations		1,109	1,126	1,145	1,141	1,078
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 76. Estimated Results for Peru: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Always Vote in Local Elections	coeff.	-0.304**					-0.290**	
	mar.eff.	-0.109					-0.104	
	p value	(0.026)					(0.043)	
Always Vote in National Elections	coeff.		-0.139					-0.146
	mar.eff.		-0.049					-0.051
	p value		(0.306)					(0.319)
Signing a Petition	coeff.			-0.478***			-0.473***	-0.472***
	mar.eff.			-0.147			-0.143	-0.143
	p value			(0.000)			(0.000)	(0.000)
Engaging in Demonstration	coeff.				-0.158		0.049	0.0578324
	mar.eff.				-0.052		0.017	0.0198902
	p value				(0.172)		(0.696)	0.652
Active Political Membership	coeff.					-0.477**	-0.443**	-0.437**
	mar.eff.					-0.142	-0.131	-0.130
	p value					(0.022)	(0.038)	(0.041)
Observations		1,129	1,114	1,071	1,091	1,150	1,021	1,010
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 77. Estimated Results for Peru: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	0.034			-0.019	-0.026
	mar.eff.	0.011			-0.006	-0.008
	p value	(0.768)			(0.867)	(0.834)
Patriotism	coeff.		0.145			0.134
	mar.eff.		0.048			0.044
	p value		(0.112)			(0.156)
Tax Morale	coeff.			0.017	0.010	0.019
	mar.eff.			0.006	0.003	0.006
	p value			(0.830)	(0.901)	(0.828)
Observations		1,119	1,010	1,117	1,081	950
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 78. Estimated Results for Peru: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Support for Government Involve.	coeff.	0.059	0.061	0.059	0.054	0.060
	mar.eff.	0.020	0.020	0.017	0.015	0.016
	p value	(0.112)	(0.105)	(0.136)	(0.184)	(0.144)
Confidence in Market institution	coeff.	-0.015	-0.020	-0.014	0.000	0.010
	mar.eff.	-0.005	-0.006	-0.004	0.000	0.002
	p value	(0.718)	(0.651)	(0.758)	(0.986)	(0.841)
Confidence in Governmental Insti.	coeff.	-0.094	0.094	0.097	0.078	0.102
	mar.eff.	-0.032	0.031	0.029	0.021	0.028
	p value	(0.545)	(0.569)	(0.591)	(0.678)	(0.589)
Political participation	coeff.	-0.071**	-0.078**	-0.085**	-0.080**	-0.080**
	mar.eff.	-0.024	-0.026	-0.025	-0.022	-0.022
	p value	(0.027)	(0.016)	(0.016)	(0.031)	(0.032)
Individual Norms	coeff.	0.002	-0.000	0.013	0.047	0.058
	mar.eff.	0.000	-0.000	0.003	0.013	0.016
	p value	(0.953)	(0.995)	(0.798)	(0.369)	(0.277)
Education (Attended University)	coeff.					-0.502***
	mar.eff.					-0.122
	p value					(0.001)
Employment Status (Full Time)	coeff.				-1.043***	-1.064***
	mar.eff.				-0.243	-0.243
	p value				(0.000)	(0.000)
Nature of Task (non-manual)	coeff.			-0.458***	-0.382**	-0.189
	mar.eff.			-0.138	-0.106	-0.051
	p value			(0.003)	(0.017)	(0.267)
Scales of Income (High Income)	coeff.		-0.623***	-0.784***	-0.578***	-0.492**
	mar.eff.		-0.208	-0.236	-0.161	-0.134
	p value		(0.001)	(0.000)	(0.009)	(0.026)
Observations		884	875	819	819	819
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Estimated Results for South Africa

Table 79. Estimated Results for South Africa: Demographics.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Education (Attended University)	coeff.	-0.770***			-0.441***	-0.943***
	mar.eff.	-0.280			-0.152	-0.270
	p value	(0.000)			(0.000)	(0.000)
Employment Status (Full Time)	coeff.		-2.606***		-2.573***	
	mar.eff.		-0.672		-0.663	
	p value		(0.000)		(0.000)	
Nature of Task (non-manual)	coeff.			0.692***		0.763***
	mar.eff.			0.254		0.276
	p value			(0.000)		(0.000)
Scales of Income (High Income)	coeff.	-0.634***	-0.231**	-0.316**	-0.200*	-0.234*
	mar.eff.	-0.252***	-0.087	-0.116	-0.075	-0.084
	p value	(0.000)	(0.045)	(0.011)	(0.085)	(0.063)
Sex (Male)	coeff.	-0.431***	-0.338***	-0.350***	-0.340***	-0.355***
	mar.eff.	-0.170	-0.126	-0.128	-0.127	-0.128
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Middle Age (29-50)	coeff.	-0.492***	-0.258***	-0.479***	-0.252***	-0.455***
	mar.eff.	-0.193	-0.096	-0.173	-0.093	-0.162
	p value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marital Status (Married)	coeff.	-0.329***	-0.178***	-0.407***	-0.171***	-0.387***
	mar.eff.	-0.130	-0.067	-0.147	-0.064	-0.138
	p value	(0.000)	(0.002)	(0.000)	(0.003)	(0.000)
Social Class (White Collar)	coeff.	-0.145*	-0.127	-0.422***	-0.057	-0.241***
	mar.eff.	-0.057	-0.047	-0.144	-0.02	-0.084
	p value	(0.055)	(0.170)	(0.000)	(0.548)	(0.005)
Observations		3,276	3,292	2,597	3,260	2,575
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 80. Estimated Results for South Africa: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	0.031				0.098
	mar.eff.	0.012				0.039
	p value	(0.681)				(0.234)
Against Private Ownership	coeff.		0.226***			0.216**
	mar.eff.		0.090			0.086
	p value		(0.006)			(0.013)
Belief in Government Delivery	coeff.			0.181**		0.171
	mar.eff.			0.072		0.068
	p value			(0.022)		(0.050)
Competition is Bad	coeff.				0.054	-0.012
	mar.eff.				0.021	-0.004
	p value				(0.484)	(0.885)
Observations		3,254	3,212	3,275	3,265	3,151
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 81. Estimated Results for South Africa: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	-0.170**				-0.241***
	mar.eff.	-0.067				-0.095
	p value	(0.023)				(0.009)
Confidence in Major Companies	coeff.		-0.062			-0.108
	mar.eff.		-0.024			-0.042
	p value		(0.400)			(0.264)
Confidence in Government	coeff.			0.074		0.206**
	mar.eff.			0.029		0.082
	p value			(0.298)		(0.032)
Confidence in Civil Services	coeff.				0.018	0.049
	mar.eff.				0.007	0.019
	p value				(0.801)	(0.631)
Observations		3,097	3,150	3,124	3,148	2,978
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 82. Estimated Results for South Africa: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Always Vote in Local Elections	coeff.	-0.108**					-0.143***	
	mar.eff.	-0.043					-0.056	
	p value	(0.020)					(0.004)	
Always Vote in National Elections	coeff.		-0.163***					-0.206***
	mar.eff.		-0.065					-0.081
	p value		(0.001)					(0.000)
Signing a Petition	coeff.			-0.206***			-0.173**	-0.173**
	mar.eff.			-0.080			-0.068	-0.068
	p value			(0.005)			(0.028)	0.028
Engaging in Demonstration	coeff.				-0.131**		-0.045	-0.0475051
	mar.eff.				-0.052		-0.017	-0.0188045
	p value				(0.084)		90.586)	0.566
Active Political Membership	coeff.					-0.292***	-0.263***	-0.276***
	mar.eff.					-0.116	-0.104	-0.109
	p value					(0.000)	(0.000)	(0.000)
Observations		3,235	3,227	3,008	3,069	3,308	2,852	2,850
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 83. Estimated Results for South Africa: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	-0.027			-0.009	-0.044
	mar.eff.	-0.010			-0.003	-0.017
	p value	(0.723)			(0.898)	0.595
Patriotism	coeff.		-0.040			-0.057
	mar.eff.		-0.016			-0.022
	p value		(0.421)			(0.269)
Tax Morale	coeff.			-0.095**	-0.105**	-0.092*
	mar.eff.			-0.037	-0.041	-0.036
	p value			(0.051)	(0.036)	(0.095)
Observations		3,159	2,775	3,274	3,128	2,634
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 84. Estimated Results for South Africa: Composite Variables.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Support for Government Involve.	coeff.	0.024	0.026	0.068***	0.045	0.038
	mar.eff.	0.009	0.010	0.024	0.013	0.010
	p value	(0.229)	(0.196)	(0.006)	(0.137)	(0.216)
Confidence in Market institution	coeff.	-0.129***	-0.131***	-0.050*	-0.031	-0.026
	mar.eff.	-0.050	-0.051	-0.018	-0.008	-0.007
	p value	(0.000)	(0.000)	(0.097)	(0.387)	(0.464)
Confidence in Governmental Insti.	coeff.	0.618***	0.646***	0.183*	0.106	0.093
	mar.eff.	0.242	0.253	0.066	0.030	0.026
	p value	(0.000)	(0.000)	(0.073)	(0.376)	(0.441)
Political participation	coeff.	-0.088***	-0.093***	-0.093***	-0.082***	-0.077***
	mar.eff.	-0.034	-0.036	-0.033	-0.023	-0.021
	p value	(0.000)	(0.000)	(0.000)	(0.004)	(0.007)
Individual Norms	coeff.	0.000	-0.0009	-0.117***	-0.088**	-0.086**
	mar.eff.	0.000	-0.0003	-0.042	-0.025	-0.024
	p value	0.999	(0.972)	(0.000)	(0.018)	(0.021)
Education (Attended University)	coeff.					-0.543***
	mar.eff.					-0.126
	p value					(0.001)
Employment Status (Full Time)	coeff.				-2.390***	-2.347***
	mar.eff.				-0.550	-0.536
	p value				(0.000)	(0.000)
Nature of Task (non-manual)	coeff.			0.617***	0.839***	0.852***
	mar.eff.			0.224	0.238	0.239
	p value			(0.000)	(0.000)	(0.000)
Scales of Income (High Income)	coeff.		-0.054	-0.413***	0.048	0.091
	mar.eff.		-0.021	-0.150	0.013	0.025
	p value		0.57	(0.002)	(0.758)	(0.565)
Observations		2,480	2,460	2,019	2,009	1,996
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Estimated Results for Yemen

Table 85. Estimated Results for Yemen: Support for Government Involvement.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Preference for Egalitarian Income	coeff.	0.213				0.075
	mar.eff.	0.084				0.029
	p value	(0.149)				(0.655)
Against Private Ownership	coeff.		0.045			-0.052
	mar.eff.		0.018			-0.020
	p value		(0.775)			(0.770)
Belief in Government Delivery	coeff.			0.522***		-0.535**
	mar.eff.			0.205		-0.211
	p value			(0.009)		(0.018)
Competition is Bad	coeff.				-0.037	0.222
	mar.eff.				-0.014	0.088
	p value				(0.891)	(0.486)
Observations		876	835	927	890	799
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 86. Estimated Results for Yemen: Confidence in Institutions.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Confidence in Unions	coeff.	-0.384				-0.770**
	mar.eff.	-0.152				-0.304
	p value	(0.151)				(0.028)
Confidence in Major Companies	coeff.		-0.586***			0.663**
	mar.eff.		-0.230			0.262
	p value		(0.008)			(0.037)
Confidence in Government	coeff.			-0.229		0.280
	mar.eff.			-0.090		0.110
	p value			(0.165)		(0.343)
Confidence in Civil Services	coeff.				-0.047	-0.399
	mar.eff.				-0.018	-0.157
	p value				(0.836)	0(.271)
Observations		488	561	888	826	405
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 87. Estimated Results for Yemen: Political Participation.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Always Vote in Local Elections	coeff.	-0.333***					0.379***	
	mar.eff.	-0.131					0.150	
	p value	(0.003)					(0.003)	
Always Vote in National Elections	coeff.		-0.380***					0.421***
	mar.eff.		-0.149					0.166
	p value		(0.000)					(0.001)
Signing a Petition	coeff.			-0.413*			-0.312	-0.259
	mar.eff.			-0.163			-0.124	-0.103
	p value			0.097			(0.317)	(0.389)
Engaging in Demonstration	coeff.				-0.202		-0.197	-0.233
	mar.eff.				-0.080		-0.078	-0.092
	p value				(0.146)		(0.281)	(0.187)
Active Political Membership	coeff.					-0.419***	-0.267*	-0.356**
	mar.eff.					-0.165	-0.106	-0.141
	p value					(0.001)	0.085	(0.018)
Observations		802	849	740	837	959	601	637
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 88. Estimated Results for Yemen: Individual Norms.

Dependent Variable: Informality		(1)	(2)	(3)	(4)	(5)
Practice Religion	coeff.	-0.544**			-0.610**	-0.597**
	mar.eff.	-0.213			-0.241	-0.236
	p value	(0.017)			(0.012)	(0.015)
Patriotism	coeff.		-0.120			-0.009
	mar.eff.		-0.046			-0.003
	p value		(0.344)			(0.949)
Tax Morale	coeff.			0.097	0.095	0.095
	mar.eff.			0.038	0.037	0.037
	p value			(0.447)	(0.464)	(0.471)
Observations		942	949	824	807	799
$Prob > chi2$		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

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