

TAX AND DEVELOPMENT

COMMITTEE ON FISCAL AFFAIRS • DEVELOPMENT ASSISTANCE COMMITTEE
TASK FORCE ON TAX AND DEVELOPMENT

What drives tax morale?

What do citizens, particularly those in developing countries, think about paying tax? Does it matter? This study provides fresh analysis of public opinion surveys to examine what lies behind citizens' "tax morale" – their motivation to pay their taxes – other than their legal obligation to do so.¹

1. TAX AND DEVELOPMENT

Tax revenues provide governments with the funds they need to invest in development, relieve poverty, deliver public services and build the physical and social infrastructure for long-term growth. However, many developing countries face challenges in increasing their revenue from domestic sources. These challenges include a small tax base, a large informal sector, weak governance and administrative capacity, low levels of per capita income, domestic savings and investment and possibly tax avoidance by elites. Some countries, including half of those in sub-Saharan Africa, raise less than 17% of their gross domestic product (GDP) in tax revenues. This is the minimum level considered by the UN as necessary to achieve the Millennium Development Goals. By way of comparison, OECD countries raise on average close to 35% of GDP in tax revenues.

Developing countries and development partners alike increasingly realise the importance of mobilising domestic financial resources for development (Box 1.1). For example, the Doha Declaration on Financing for Development (2008) and the Busan Partnership for Effective Development Cooperation (2011) both encourage a greater role for domestic resources, taxation in particular, in funding development.²

BOX 1.1. Why does tax matter for development?

- Tax revenue provides a sustainable basis for development.
- Tax revenue reduces aid dependency.
- Stable and predictable tax systems provide a key platform for trade and investment.
- A fair, transparent and credible tax system promotes statebuilding by encouraging governments to be more accountable to their citizens.

Although there is a strong correlation between the level of a country's development and its tax revenues, there are significant differences across countries at similar stages of development (see Annex A). For example, why is it that while Jordan and Guatemala have very similar levels of GDP per capita, tax revenues in Jordan are around 33% of GDP, while in Guatemala revenues only amount to around 13% of GDP (almost half of the expected level given its GDP per capita)? And why is it that the citizens of some countries are happy to pay their taxes (e.g. practically all Ghana's citizens), while others are not (e.g. most of Serbia's)?

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BOX 2.1. What is the *World Values Survey* and how is it relevant?

The WVS is a global research project that explores people's values and beliefs, how they change over time and what social and political impact they have. It is carried out by a worldwide network of social scientists who, since 1981, have conducted representative national surveys in almost 100 countries. The WVS is the only source of empirical data on attitudes covering a majority of the world's population (nearly 90%). The WVS is a useful data source because it asks people "Do you justify cheating on taxes if you have a chance?", "Do you justify claiming benefits you're not entitled to?", "How good would you say is having a democratic political system for governing your country?" and "How much confidence do you have in the government (in your nation's capital)?"

<http://www.worldvaluessurvey.org/>

Research shows a significant correlation between tax morale and tax compliance in both developing and developed countries. For example, tax morale is an important determinant of the "shadow economy" and therefore has an impact on tax evasion (Torgler, 2011). Thus, understanding better what drives differences in tax morale across countries is a key element in understanding differences in tax compliance. It also offers a more "grassroots" perspective on tax systems than administrative and quantitative measures, such as tax to GDP ratio.³

What's new about this research?

Research to date has identified a range of socioeconomic and institutional factors that may influence people's willingness to pay taxes. A review of the literature (see Annex B) confirmed the relevance of moving away from mechanistic recommendations on tax administration, towards an analysis

of the relationship between tax morale in developing countries and individual characteristics as well as satisfaction with and trust in the government. It also revealed significant gaps and unresolved debates on the factors underlying tax behaviour.

This report contributes fresh knowledge to help fill these gaps and further the debates. It does so by analysing data from global and regional public opinion surveys (bearing in mind that attitudes expressed in public opinion surveys do not necessarily predict actual behaviour, *i.e.* people do not always do what they say they will do). It begins by drawing a global picture of tax morale by identifying socioeconomic, institutional and perceptual factors in data from the *World Values Survey* (WVS). It then complements the global analysis with more detailed regional information from three barometer surveys (of Africa, Asia and Latin America). The report concludes by highlighting some of the factors particularly relevant for policy makers.

TABLE 2.1. Countries that responded to the tax morale question

Western and Central Europe	Eastern Europe	Asia	Africa	North America and Oceania	Latin America and Caribbean
Andorra	Bulgaria	China	Burkina Faso	Australia	Argentina
Cyprus	Moldova	Chinese Taipei	Egypt	Canada	Brazil
Finland	Poland	Georgia	Ethiopia	New Zealand	Chile
France	Romania	Hong Kong, China	Ghana	United States	Colombia
Germany	Russia	India	Mali		Guatemala
Italy	Serbia	Indonesia	Morocco		Mexico
Netherlands	Slovenia	Iran	Rwanda		Trinidad and Tobago
Norway	Ukraine	Japan	South Africa		Uruguay
Spain		Jordan	Zambia		
Sweden		Malaysia			
Switzerland		Korea			
United Kingdom		Thailand			
		Turkey			
		Vietnam			

Note: This grouping represents a slight modification of the United Nation's regional classification (<http://unstats.un.org/unsd/methods/m49/m49regin.htm>). Due to the limited size of the sample, using more detailed sub-regions would render the exercise of little comparative value.

2. WHAT FACTORS INFLUENCE TAX MORALE? THE GLOBAL PICTURE

The *World Values Survey* provides data to help build a global picture of tax morale (Box 2.1). For this report, data from the latest WVS was used, which covered around 90 countries. The analysis is based on answers to the question “do you justify cheating on taxes if you have the chance?”, a question to which 55 countries responded.⁴ For this report, these countries were grouped under regional headings (see Table 2.1), enabling us to compare attitudes towards taxation in different parts of the world.

Citizens’ responses to questions such as those in Box 2.1 reveal socioeconomic and institutional factors that may influence tax morale in each of the regions. A micro-econometric analysis (see Annex C) allowed for an exploration of the links between these factors and citizens’ justification for cheating on taxes. The socioeconomic factors included marital status, religion, gender, educational attainment, employment status, economic status (self-reported), and economic problems (whether the household can save and/or get by or whether it needs to spend savings and/or borrow).

Institutional factors deal more directly with aspects of government in general, which can explain how citizens perceive how taxes are being spent and thus affect their willingness to pay them. These factors include support for democracy, trust in government, and preferences for redistribution (*i.e.* whether taxing the rich and subsidising the poor is an essential characteristic of democracies).

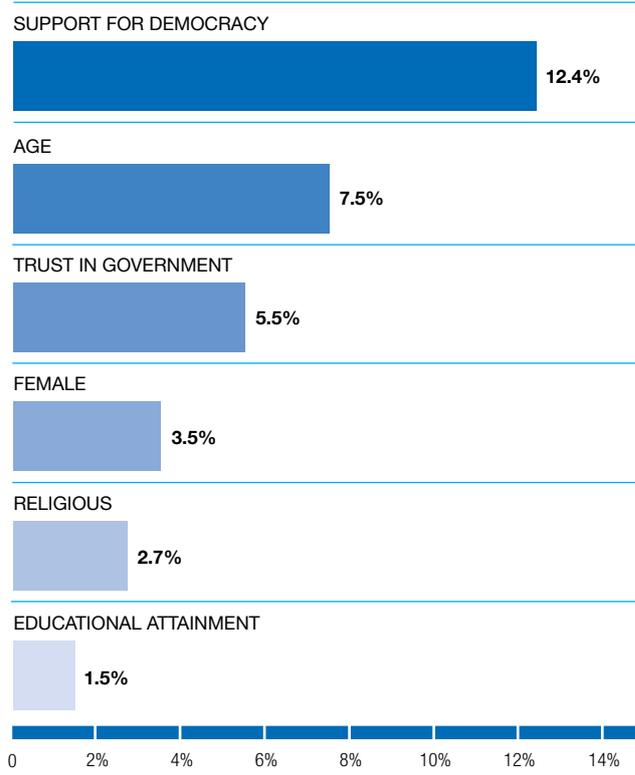
What does this analysis tell us?

The analysis emphasises that understanding socioeconomic factors and institutional factors matters in explaining people’s tax morale (see Figure 2.1):

- Those who claim a faith or religious identity have more positive attitudes towards paying taxes.
- Women exhibit higher levels of tax morale than men.⁵
- Older people are less likely to justify cheating on taxes than younger people.
- More educated individuals have more positive attitudes towards paying taxes.
- Part-time workers and the self-employed have lower tax morale than full-time employees.

These results are perhaps expected as people with higher education and formal employment are more likely to have a deeper understanding of the role of taxation in the economy and society. Full-time employees are more likely to have income tax deducted by their employer.

FIGURE 2.1. Institutional and socioeconomic factors associated with tax morale globally



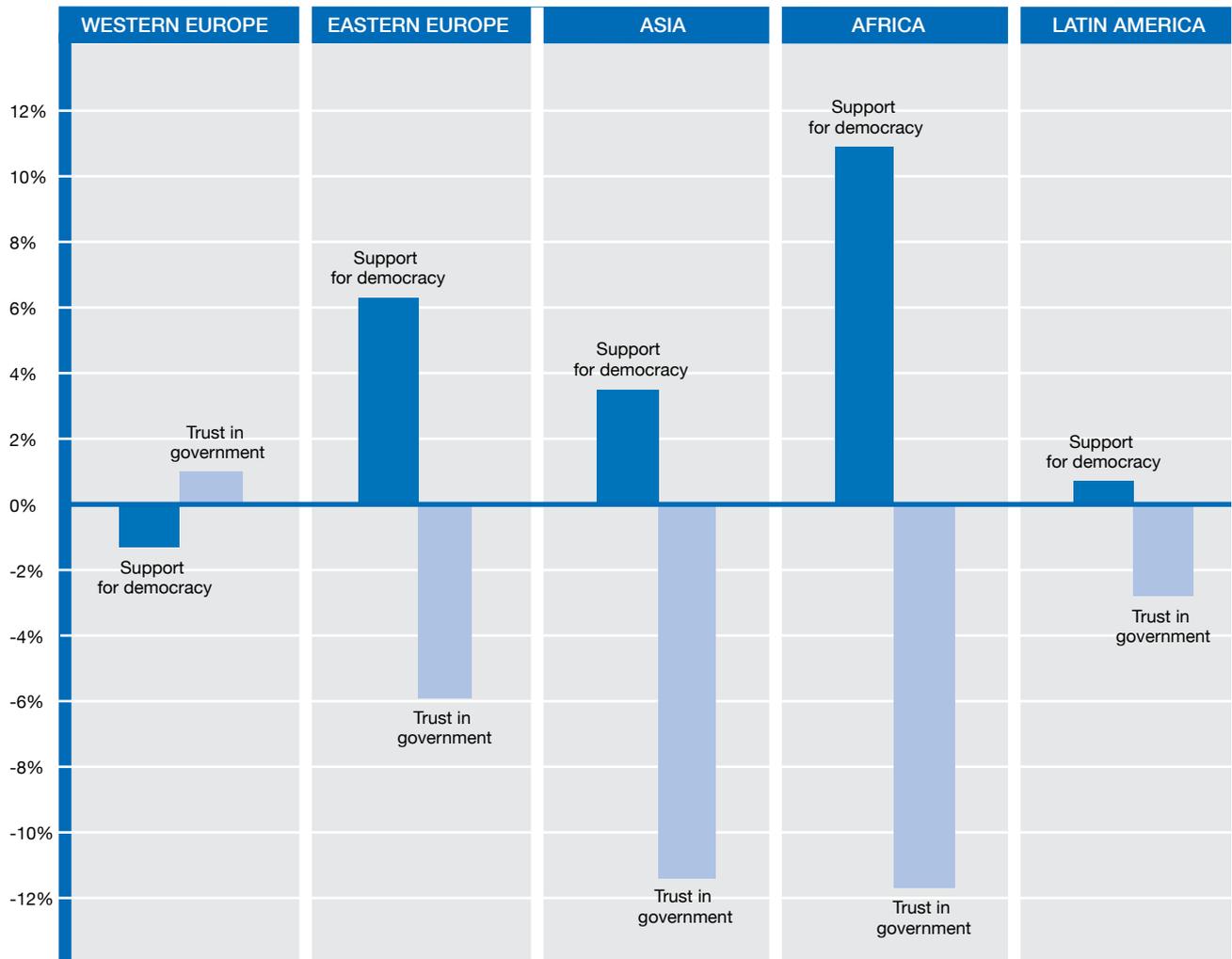
Note: % refers to the marginal effects of selected variables.

Source: OECD Secretariat - based on the *World Values Survey* database (2005).

This basic information can help to develop taxpayer profiles to strengthen efforts to increase compliance. However, the findings from the institutional factor analysis show that public support for the government, its institutions and transparency, may help to achieve greater tax compliance than enforcement alone:

- Citizens who perceive democracy to be the best system of government for their country tend to think that cheating on taxes is unjustifiable.
- Individuals who express trust in their national government display higher tax morale than those who do not.
- Citizens who identify fiscal redistribution to be an essential characteristic of democracy, *i.e.* who think that governments should tax the rich to subsidise the poor, also show higher tax morale than those who do not.
- There is a strong correlation between individuals with high tax morale and those who frown upon claiming benefits they are not entitled to. This correlation underscores the close relationship between paying taxes, and the expectations people have about the eventual use of taxes.

FIGURE 2.2.
Regional differences in the effects of perceptions of institutions on tax morale (relative to North America and Oceania)



Notes: % refers to the marginal effects of selected variables, where 0% in the baseline of North America and Oceania.

'Support for democracy' refers to individuals who think democracy is the best political system for their country. 'Trust in government' asks individuals how much confidence they have in the government of their country's capital city.

Source: OECD Secretariat - based on the *World Values Survey* database (2005).

In this sense, feeling like a “valued customer”, who is getting a decent service in return of payment, could help explain these attitudes.

Figure 2.1 shows that greater support for democracy carries the largest marginal effect among the various factors, with people who feel positive about living in a democracy being about 12 percentage points more likely to never justify tax avoidance than those who do not like democracy as a system. Older individuals and people with greater trust in government also show less likelihood of evading taxes. While education has a positive effect on tax morale, in terms of magnitude, it is relatively small.

Variations in tax morale across regions also emerge from the analysis. Using North America and Oceania as a benchmark for illustrative purposes, Figure 2.2 compares variations in the strength of the effects of perceptions of institutions on tax morale across various regions. For example, support for democracy in Africa and Eastern Europe has a stronger correlation with tax morale than in North America, while trust in government in Asia and Africa has a weaker link. However, looking at regions as a whole can mask significant intra-regional variation. This highlights the importance of more in-depth country-specific analysis – the subject of the next section.

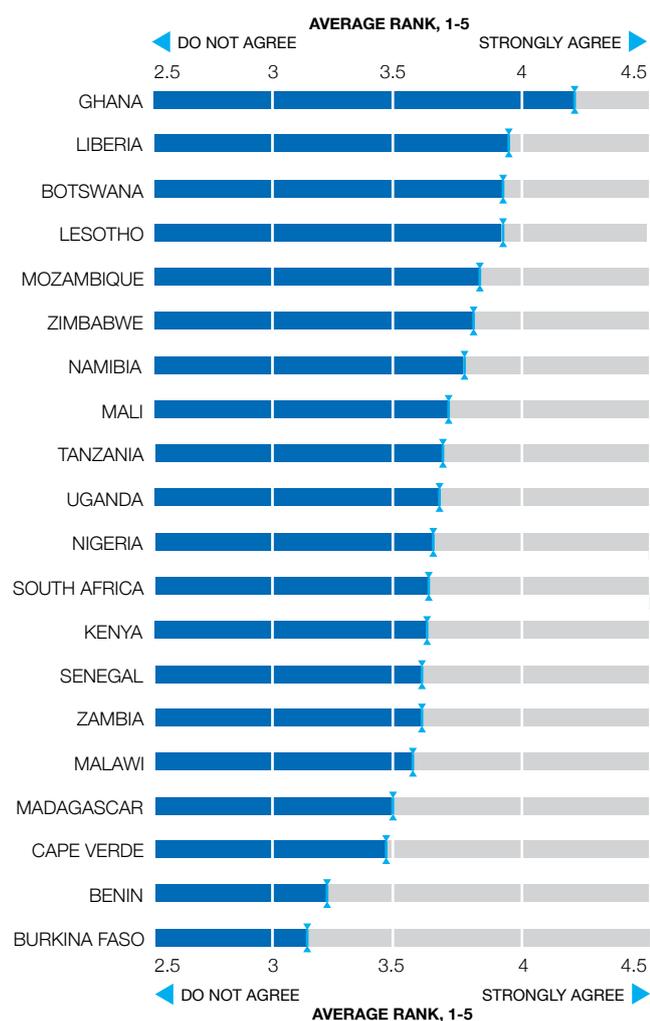
3. THE REGIONAL PICTURE

To better capture regional trends, data from three regional public opinion surveys was analysed – *Afrobarometer* (2008), *AsiaBarometer* (2005-2007) and *Latinobarómetro* (2010). As shown in Figures 3.1 to 3.3, the questions used in the various surveys are not directly comparable. However, they do capture trends within each region as well as variations between countries.

Africa

Figure 3.1 presents the results for the question “the tax department always has the right to make people pay taxes”, ranked from 1-5, with 5 representing strong agreement with the statement. This shows relatively high support for tax enforcement in Africa, at least in principle, with more than two-thirds of respondents in the whole sample agreeing with the statement, though with significant variation between countries.

FIGURE 3.1.
People in Africa who agree that the tax department always has the right to make people pay taxes

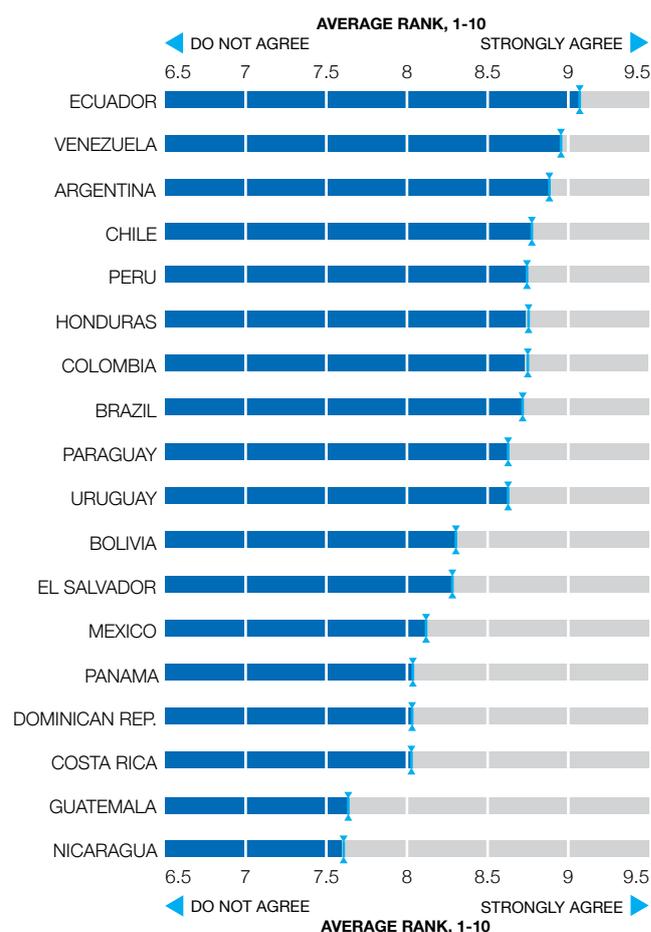


Source: OECD Secretariat - based on the *Afrobarometer* database (2008).

Latin America and the Caribbean

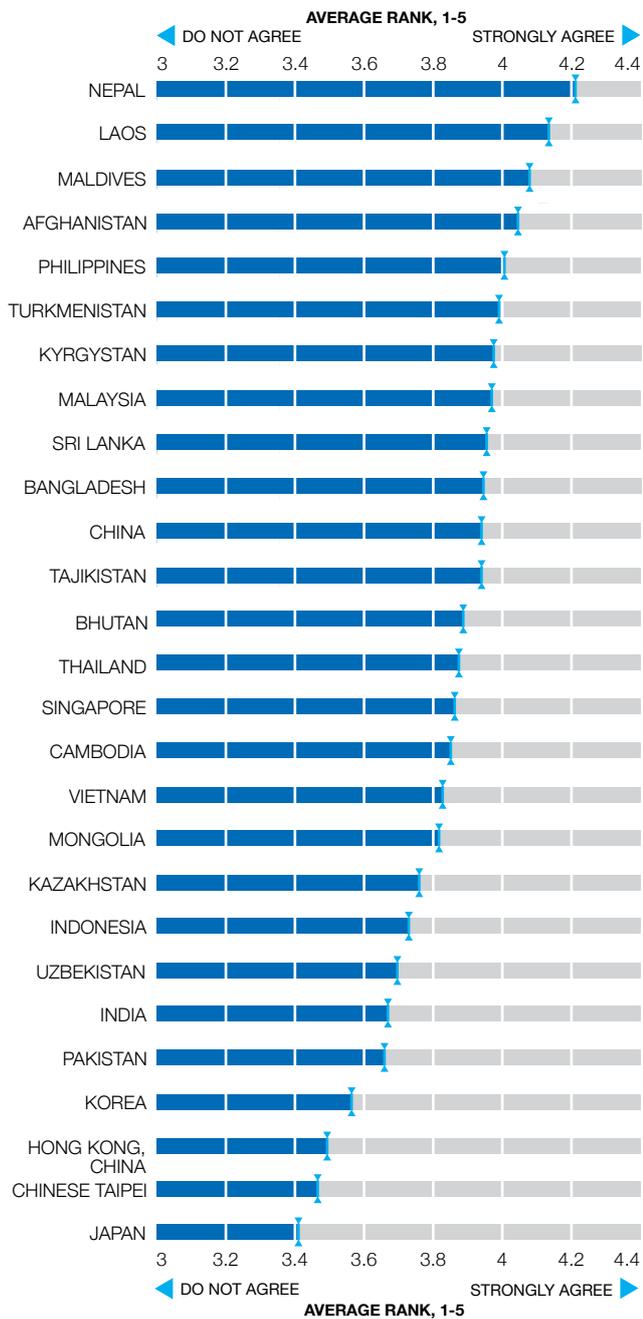
The *Latinobarometro* asks the same question as the WVS, “do you justify cheating on taxes”, thereby allowing for consideration of the issue of tax morale in a similar way. Tax morale is generally high across Latin America and the Caribbean but again with significant differences between countries (Figure 3.2).

FIGURE 3.2.
People in Latin America who agree that tax evasion is never justified



Source: OECD Secretariat - based on the *Latinobarómetro* database (2010).

FIGURE 3.3.
People in Asia who would like to see more government spending even if it requires a tax increase



Source: OECD Secretariat - based on the *AsiaBarometer* database (2005-07).

Asia

The *AsiaBarometer* survey explicitly links government spending to taxes. Survey participants are asked whether they “would like to see more or less government spending” while bearing in mind “that more spending may require a tax increase”. In general, individuals tend to support additional spending by the government (Figure 3.3), though, consistent with the other regions, there is significant variation in countries across Asia.

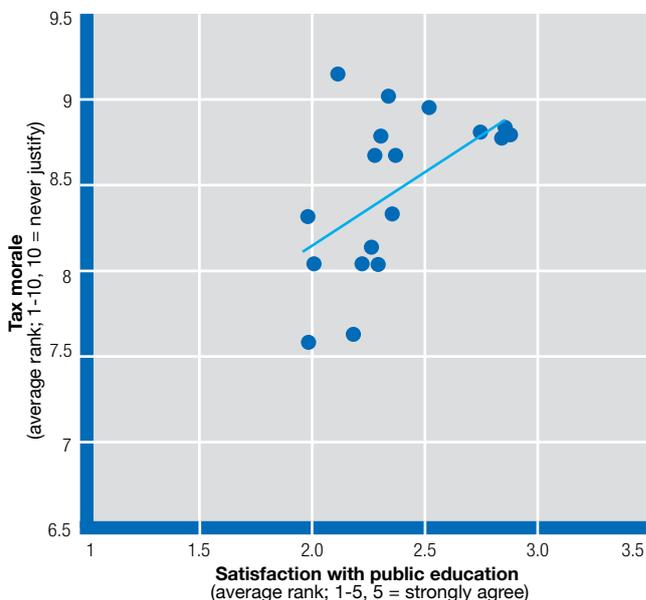
Several other factors that influence tax morale emerge from the regional data; each is discussed in detail below:

- satisfaction with public services and expenditures;
- trust in government; and
- perceptions of corruption.

Satisfaction with public services

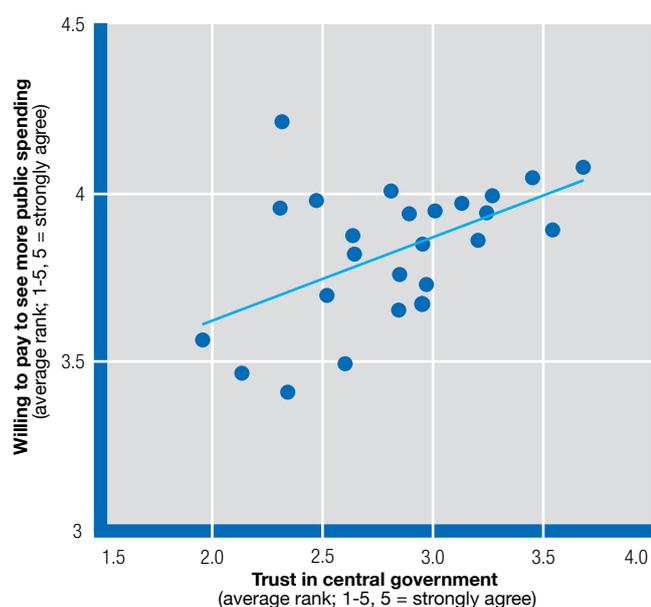
Satisfaction with public expenditures and services can serve as a measure of how well governments convert taxes into expenditures. In all three regions satisfaction with services such as health, education, water and sanitation influences tax morale (Figure 3.4 shows an example from Latin America).

FIGURE 3.4.
Tax Morale and satisfaction with public services in Latin America



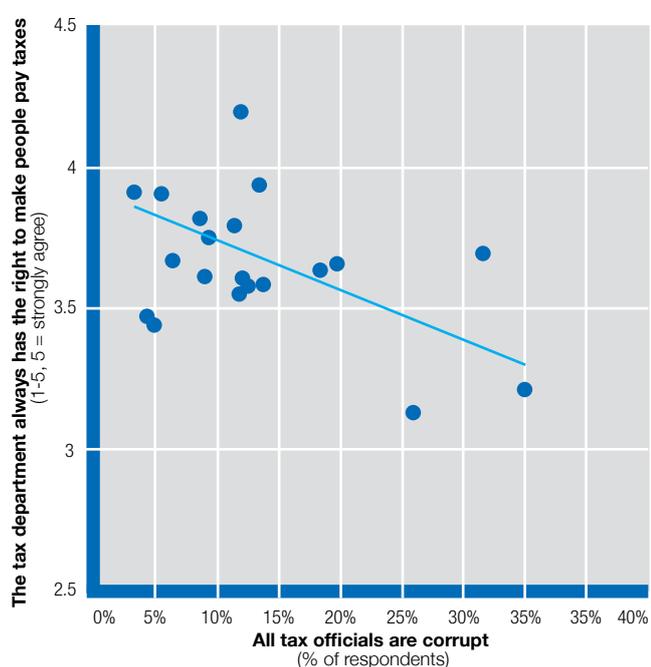
Source: OECD Secretariat - based on the *Latinobarómetro* database (2010).

FIGURE 3.5.
Trust in government and willingness to pay tax in Asia



Source: OECD Secretariat - based on the *AsiaBarometer* database (2005-07).

FIGURE 3.6.
Perceptions of corruption and tax morale in Africa



Source: OECD Secretariat - based on the *Afrobarometer* database (2008).

Education may therefore generate a double dividend, through its intrinsic benefits as well as via the satisfaction with its provision. The inverse of this is the “dissatisfied customer relationship”, whereby greater dissatisfaction with public services is linked to lower tax morale. Efforts to strengthen citizens’ awareness of the relationship between tax revenues and public expenditures may help to improve tax morale.

Trust in government

Citizens are more likely to perceive tax obligations more favourably when their government is seen to be acting in a trustworthy manner. In Asia, for example (Figure 3.5), trust in government is associated with a demand for increased spending. A government seen to be making good use of tax revenue (among other factors) is associated with higher levels of trust and tax morale. As mentioned above, this underlines how clarifying the benefits between taxes and expenditures can increase compliance.

Corruption

Data from the three regional surveys, but especially from Africa (Figure 3.6), point to a possible relationship between tax morale and the perception of corruption. There is some evidence to suggest that tax evasion is associated with perceptions of corruption in public institutions, particularly amongst tax officials. Higher levels of tax morale are reported when corruption is (perceived to be) under control. This finding helps to clarify the link between corruption and tax morale – an area with no consistent findings in the literature to date. This reinforces the importance of making transparency a priority. If tax reforms and public expenditures are accompanied by increased transparency, tax morale and compliance may be enhanced.

4. WHAT DOES THIS MEAN FOR POLICY?

Tax morale is at the heart of statebuilding and the citizen-state relationship. This study has identified broad factors and trends which appear to hold true across a range of countries which differ in income levels and geography. This enables us to identify the following potential areas where civil society, business organisations and the international development community could support the efforts of governments to improve tax morale and tax compliance:

- Strengthen and clarify the links between revenue and expenditure: Positive public perceptions of government, public institutions and services may increase tax compliance and revenues.

WHAT DRIVES TAX MORALE?

“Earmarking” (or hypothecating) revenues from specific sources to specific expenditures is one way governments have approached strengthening the links between taxes and spending. While controversial, some governments have decided that the political benefits of this approach outweigh the economic inefficiencies. For example, Ghana directs its VAT revenue to health services. Donors can also reinforce revenue and expenditure linkages in the delivery of aid. For example, donor support for public financial management (PFM) could better and more consistently integrate revenue and expenditure issues. In addition, direct public education campaigns can also reinforce revenue and expenditure linkages. Research including an OECD/International Tax Compact report on aid modalities for supporting tax systems notes that such campaigns can be an efficient and effective way of building trust and increasing public engagement (OECD, 2013).⁶ It is relevant to note here that while there are concerns to the contrary, a recent World Bank study (Sacks, 2012) finds that the provision of public services by donors and nonstate actors can strengthen, rather than undermine, the relationship between citizens and the state.⁷

- Build taxpayer profiles: analysing citizens’ attitudes and perceptions towards tax issues would allow countries to develop their own taxpayer profiles. This could provide information on, for example which groups of citizens are most resistant to paying tax and which groups would be the most easily convinced of the benefits of taxation. Insights into the various socioeconomic and institutional factors influencing tax morale can also inform the efforts of revenue authorities, business and civil society to develop and target taxpayer literacy and education campaigns.

- Understand the informal sector better: taxing the informal sector is a challenge for most developing countries.⁸ Efforts to better understand the profile and perceptions of small traders, for example, could help to engage them and establish a dialogue on tax issues thereby contributing to a “culture of compliance”. There are gender implications for the taxation of this sector as well, given that women disproportionately work informally, particularly in developing countries.⁹
- Increase the transparency of tax policy making and modernise tax administration procedures: these measures would reduce opportunities for corruption and improve the “taxpayer experience”. Citizens’ perceptions of public officials, especially tax officials, can influence attitudes towards taxation (e.g. being asked or expected to pay bribes).¹⁰ Simplifying tax regimes, and greater use of information technology are ways to improve tax morale and compliance. Particular attention should be paid to experiences at the local level as it is often here that coercion and corruption are most prevalent.
- Align efforts in different areas to avoid negative interactions among the drivers of compliance:¹¹ the different factors that influence compliance behaviour also influence each other. For example, taxpayer perceptions that the revenue authority’s approach is overly controlling can cause them to not feel trusted by the revenue authority. This in turn may call into question their trust of the revenue authority itself, which may then reduce compliance.

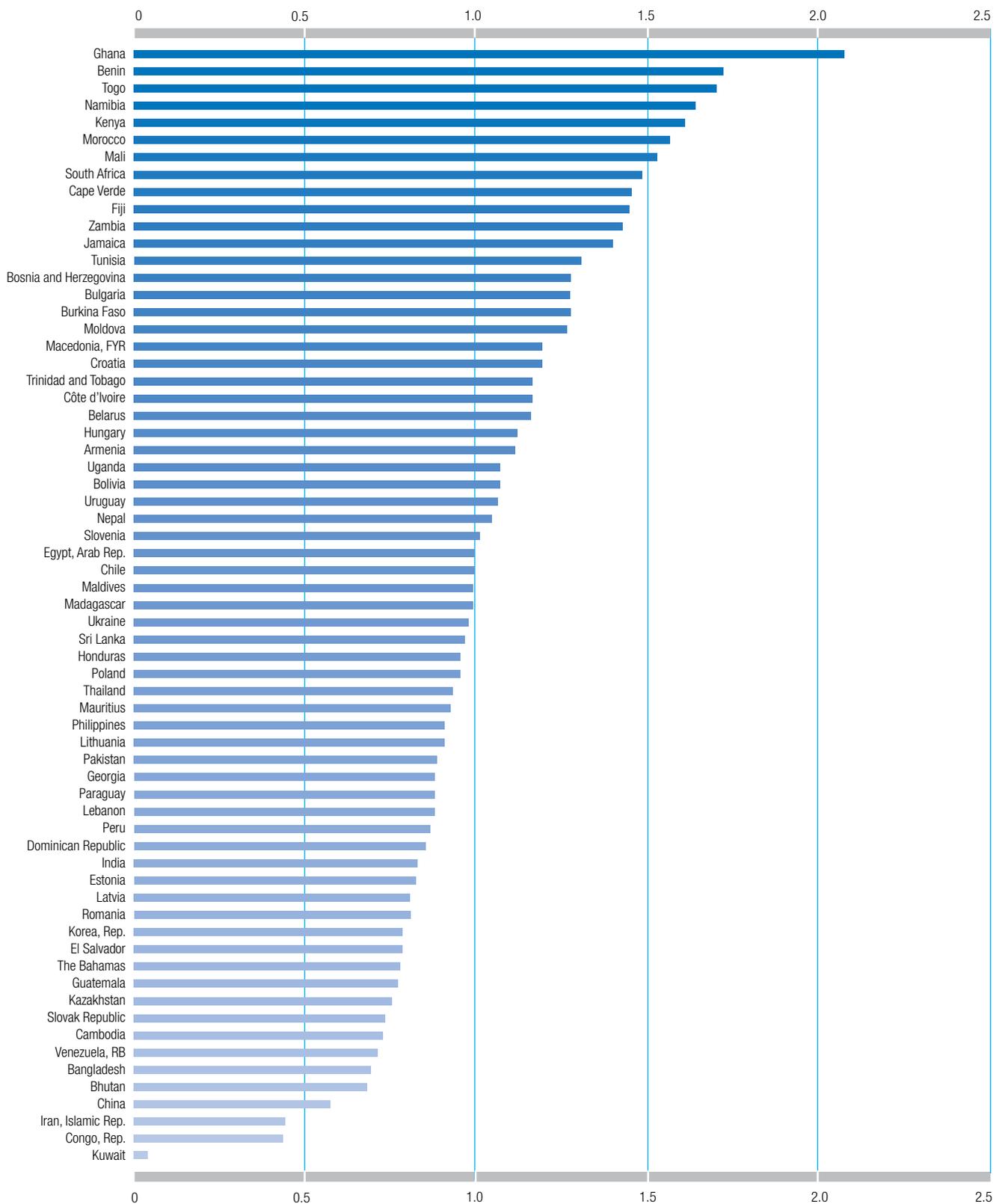
The similarity of findings across regions suggests that opportunities for sharing experiences could be mutually beneficial. The OECD’s Task Force on Tax and Development offers a forum in which such experiences can be usefully shared.¹² Going forward, additional countries should be included in the relevant surveys, more questions related to issues affecting tax morale should be added and efforts should be made to improve the comparability of questions across the various surveys.¹³

Notes

1. Abridged and modified version of Daude, C., H. Gutiérrez and Á. Melguizo (2012) "What Drives Tax Morale", *OECD Development Centre Working Paper* 315, OECD, Paris. <http://www.oecd.org/dev/latinamericaandthecaribbean/WP315%20AE.pdf>
2. Statlink: <http://dx.doi.org/10.1787/888932532012>.
3. Fjelstad, O-H. and K. K. Heggstad (2012) *Building taxpayer culture in Mozambique, Tanzania and Zambia: Achievements, challenges and policy recommendations*. This study identifies 10 factors affecting compliance behaviour. See also Torgler, B. (2011), "Tax Morale and Compliance. Review of Evidence and Case Studies for Europe", *Policy Research Working Paper* 5922, The World Bank, Washington DC.
4. This question is not a perfect proxy for tax morale. For example, cheating may not be an 'option' in countries where the likelihood of being detected and punished is perceived to be high. However, in the absence of a more specific question or series of questions it is an acceptable proxy.
5. The existing literature is divided on the question of gender. Up to half of the evidence contests the proposition that women have more positive attitudes to taxation than men.
6. OECD (2013) *Tax and Development: Aid Modalities for Strengthening Tax Systems* (Prepared by Nathan Associates Inc. on behalf of the International Tax Compact of the German Federal Ministry of Economic Cooperation and Development [BMZ], German Financial Cooperation [KfW], and the OECD Development Assistance Committee's Tax and Governance Task Force [GOVNET]).
7. Sacks, A. "Can Donors and Non-State Actors Undermine Citizens' Legitimizing Beliefs?" *Policy Research Working Paper* 6158, The World Bank, Washington DC.
8. The International Centre for Tax and Development (ICTD), and the Center for Economic Policy and Research's (CEPR) Private Enterprise Development in Low Income Countries (PEDL) programme have both launched research initiatives focused on informality. Improving the compliance environment for small and medium enterprises is also a priority for developed countries. See, for example, recent work by the OECD/Forum on Tax Administration: <http://www.oecd.org/site/ctpfta/49428016.pdf>
9. Basten, S. (2012), *Taxation and the Informal Sector in Least Developed Countries, with a Focus on Zambia* (Report to the UK's International Development Committee) notes that the female working population was employed almost entirely in the informal sector in several LDCs. <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmintdev/130/130vw06.htm>
10. Moore, M. (2012), *Improving Governance in the MENA Region through Tax Reform?* (Background Paper for the MENA Regional Conference on Better Governance and Fair Taxation, May 2012). http://www.itdweb.org/documents/Conferences/MENAConference2012/Presentations/MENA_ConferenceMPM3May2012_Versionfortranslation.pdf
11. OECD/Forum on Tax Administration research in this area has identified six drivers of taxpayer compliance behaviour: opportunity, economy, social norms, fairness and trust, deterrence and the interactions amongst them. Forum on Tax Administration: Small/Medium Enterprise (SME) Compliance Subgroup (2010) *Information Note Understanding and Influencing Taxpayers' Compliance Behaviour*. <http://www.oecd.org/ctp/taxadministration/46274793.pdf>
12. The OECD's Informal Task Force on Tax and Development was created in January 2010 following the Joint Meeting on Tax and Development between the Committee on Fiscal Affairs (CFA) and the Development Assistance Committee (DAC). Co-chaired by South Africa and the Netherlands, the Task Force's role is to support the Committees in delivering a programme to strengthen tax systems in developing countries. Task Force members (OECD and developing countries, international and regional organisations, NGOs and business) have identified four areas of work as key for developing countries efforts to mobilise domestic resources: state building, accountability and effective capacity development; more effective transfer pricing regimes in developing countries; increased transparency in the reporting of financial data by MNEs; and countering international tax evasion/avoidance and improving transparency and exchange of information. For more information visit: <http://www.oecd.org/ctp/globalrelationsintaxation/taxanddevelopment.htm>
13. As a start, the International Centre for Tax and Development (www.ICTD.ac) has commissioned the organisers of the 2011-2012 round of the *Afrobarometer* survey to include a series of questions about taxation.

ANNEX A

FIGURE A.1.
Tax Effort Index in 2008



Note: Tax effort is an index measure of how well a country is doing in terms of tax collection, relative to what could be reasonably expected given its economic potential.

Source: OECD (2011) based on World Development Indicators.

ANNEX B

Brief Summary of the Literature

For seminal references on taxation in developing countries see Newey and Stern (1987), Tanzi (1992), and Bird *et al* (2008).¹ The existing literature on tax morale identifies a range of socioeconomic and institutional factors that affect tax morale.² In terms of the socioeconomic factors, those who claim a faith or religious identity are more strongly associated with positive attitudes towards paying taxes (Torgler, 2004 for India; Daude and Melguizo, 2010 for Latin America). Middle-aged and senior respondents justify less tax evasion (Torgler, 2005 for Asia; Hug and Sporri, 2011 for Eastern Europe; Torgler, 2005; Gaviria, 2007, Daude and Melguizo, 2010 for Latin America). By contrast, the literature is divided on the effects of gender with up to half of the evidence contesting the proposition that women have more positive attitudes to taxation than men.³

Self-perceived economic situation, education and employment status also matter for tax morale. Individuals who are satisfied with their financial position and do not report having economic problems justify tax evasion less frequently.⁴ Educational attainment positively impacts tax morale in most studies and regions. Most studies also show that the self-employed exhibit lower tax morale than those employed by others, while retirees report a significantly higher one than those still active in the labour market (Torgler, 2004 for Asia and Hug and Sporri, 2011 for Eastern Europe).

In terms of institutional factors, the literature identifies trust in government and satisfaction with democracy and with public services, health and education in particular, as influencing tax morale.⁵ Building fiscal legitimacy lies in the support of the public for the government and this in turn can help achieve greater results in terms of fiscal revenue more than compliance alone. The enforcement of the tax code and overall trust in the legal system are also correlated with higher levels of tax morale (Levi and Sacks, 2009 for Africa), although some studies find that the fear of being caught is not a significant driver (Torgler, 2005 for Latin America). By contrast, the perception of corruption exhibits no consistent results.

Notes

1. Newey, D.M.G. and N. Stern (1987), *The Theory of Taxation for Developing Countries*. Oxford University Press, Oxford; Tanzi, V. (1992), "Structural Factors and Tax Revenue in Developing Countries: a Decade of Evidence" in L. A. Winters (ed.), *Open Economies: Structural Adjustment and Agriculture*, pp.267-285, Cambridge University Press, Cambridge; Bird, R.M., J. Martinez-Vazquez and B. Torgler (2008), "Tax Effort: The Impact of Corruption, Voice and Accountability," *Economic Analysis & Policy* 38(1), pp. 55-71.
2. Fjelstad, O-H and K. K. Heggstad (2012) *Building taxpayer culture in Mozambique, Tanzania and Zambia: Achievements, challenges and policy recommendations*. They identify 10 factors affecting compliance behaviour.
3. For Africa, see D'Arcy, M. (2011), "Why Do citizens Assent to Pay Tax? Legitimacy, Taxation, and the African State", *Afrobarometer Working Papers* 126; and Levi, M. and A. Sacks (2009), "Legitimizing beliefs: Sources and Indicators", *Regulation & Governance*, 3(4), pp. 311-333. For Latin America, see Torgler, B. (2005), "Tax Morale in Latin America", *Public Choice*, 122(1/2), pp. 133-157 and Daude, C. and A. Melguizo (2010), "Taxation and More Representation? On Fiscal Policy, Social Mobility and Democracy in Latin America," *OECD Development Centre Working Paper* 294, OECD, Paris.
4. For Africa, see Levi and Sacks (2009). For Asia see, Torgler, B. (2004), "Tax Morale in Asian Countries", *Journal of Asian Economics*, 15(2), pp. 237-266. For Latin America see Daude and Melguizo (2010). Gaviria, A. (2007), "Social Mobility and Preferences for Redistribution in Latin America", *Economia* 8(1), pp. 55-88, shows that those with higher income tend to oppose higher redistribution.
5. Daude and Melguizo (2010) and D'Arcy (2011) target the effect of aspects of democracy and public services for Latin America and Africa, respectively. Torgler (2005) assesses the relationship of tax morale and democracy and government in Latin America. See also Torgler (2004) for Asia and for Eastern Europe Hug, S. and F. Sporri (2011), "Referendums, Trust, and Tax Evasion", *European Journal of Political Economy*, 27(1), pp.120-131.

ANNEX C

A Probit model was estimated on an individual basis with tax morale as the dependent variable and the various socioeconomic and institutional factors as independent variables (see Table C.1). It is important to note that country coverage is limited and that the results are interpreted as correlations, not causality.

TABLE C.1. Probit regressions – correlation of tax morale with socioeconomic and institutional factors (columns reflect different model specifications to test robustness)

	(1)	(2)	(3)	(4)	(5)	(6)
Religious	3.0% (0.004)***	2.7% (0.004)***	2.9% (0.004)***	3.4% (0.004)***	3.2% (0.005)***	2.7% (0.004)***
Female	3.3% (0.004)***	3.4% (0.004)***	3.3% (0.004)***	3.3% (0.004)***	3.6% (0.004)***	3.5% (0.004)***
Age	0.2% (0.000)***	0.2% (0.000)***	0.2% (0.000)***	0.2% (0.000)***	0.2% (0.000)***	0.2% (0.000)***
Educational Attainment	0.4% (0.001)***	0.4% (0.001)***	0.3% (0.001)***	0.5% (0.001)***	0.3% (0.001)***	0.2% (0.001)***
vis-à-vis Full-time employed:						
Part-time employed	-1.9% (0.007)***	-1.8% (0.007)***	-1.7% (0.007)**	-1.9% (0.007)***	-1.7% (0.008)**	-1.7% (0.007)**
Self-employed	-1.5% (0.006)***	-1.1% (0.006)*	-1.3% (0.006)**	-1.1% (0.006)*	-0.6% -0.007	-1.0% -0.007
Retired	2.7% (0.007)***	2.9% (0.007)***	2.7% (0.007)***	2.8% (0.007)***	3.0% (0.008)***	2.9% (0.007)***
Housewife	-0.1% -0.006	0.1% -0.007	0.3% -0.006	0.0% -0.007	0.6% -0.008	0.5% -0.007
Student	0.3% (0.007)	0.3% (0.007)	0.2% (0.007)	0.3% (0.008)	0.2% (0.008)	0.2% (0.008)
Unemployed	-1.1% (0.006)*	-1.2% (0.006)*	-0.6% (0.006)	-1.1% (0.007)*	-0.8% (0.007)	-0.7% (0.006)
Trust in Government		2.2% (0.002)***			1.7% (0.002)***	1.8% (0.002)***
Support for Democracy			4.3% (0.002)***		4.3% (0.003)***	4.1% (0.003)***
Redistributive Democracies				0.1% (0.001)**	0.1% (0.001)	
Observations	52,474	47,780	47,564	45,397	38,223	43,982

Notes: Marginal effects of a change in a single unit. Robust standard errors in parenthesis. *, **, *** denote significance at 10%, 5% and 1% respectively. Regressions include country and marital status dummies not reported here. The dummy for full-time employment is omitted in the regressions.

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