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A Discussion Paper

UNDERSTANDING WHAT DRIVES TAX MORALE

by

Marco Piatti[1], Markus Schaffner[1], and Benno Torgler[1,2,3]

[1]Queensland Behavioural Economics Group (QuBE), School of Economics and Finance, Queensland University of Technology, Australia, [2]EBS Universität für Wirtschaft und Recht, EBS Business School, Germany, and [3]CREMAð Center for Research in Economics, Management and the Arts, Switzerland

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1. INTRODUCTION

During the past few decades, one of the primary concerns of tax research has been the search for an understanding as to why people pay taxes. The main focus of this endeavour has been on finding ways to increase tax compliance by moving beyond the deterrence strategies that use a ñstickò or an economics-of-crime approach. To use an analogy from medicine, the research is looking for a way of preventing the disease rather than trying to treat the disease once it is established.

The obvious and often suggested policy implication of the enforcement approach is that enforcement matters because it can affect the financial considerations that motivate ï at least in part ï an individualôs compliance choices. This conclusion has been valuable. However, it is essential to recognize that this approach also presumes that an individual pays taxes because - and only because - of the economic consequences of detection and punishment (Torgler 2011).

One of the pioneering researchers in the area of the psychology of taxation made the following point more than 30 years ago: ñ . . .it could be that tax evasion is the only channel through which taxpayers can express their antipathy é we can be confident in our general prediction that if tax attitudes become worse, tax evasion will increaseò (Lewis 1982:165, 177). Before Lewis, Spicer and Lundstedt (1976) stated that the choice between tax compliance and evasion is not only made on the grounds of sanctions but also on the grounds of a set of attitudes and norms. Earlier pioneering work on tax morale was conducted in the 1960s and 1970s by German scholars around Günter Schmölders (1951/1952, 1960, 1962, 1970).

It is true that individuals care about financial incentives and they may gamble by attempting to evade taxes, but it is wrong to assume that individuals pay taxes *solely* because they fear detection and punishment. In recent years, we have found strong evidence that tax morale, the intrinsic motivation to pay taxes, strongly influences tax compliance (see, e.g. Torgler 2001, 2005a, Alm and Torgler 2006, Alm, Martinez-Vazquez and Torgler 2006, Torgler and Schneider 2007, 2009, Dulleck et al. 2012). If tax morale is so important, we need to understand the factors that shape tax morale to be able to derive policy implications.

This may also be the right thing to do from a cost-benefit perspective. It may be cheaper to prevent the disease of tax evasion rather than treat it ex post. However, encouraging tax morale may be more than a prevention tool. It could be a key tool in moving from a bad tax evasion equilibrium towards a better equilibrium. In this respect, it is important to contemplate how to facilitate a positive ñsnow-ballò effect. Frey and Torgler (2007) show empirically that if people perceive others to be more compliant, their own tax morale increases. Lewis (1982:144) convincingly argues that there is a ñtax subculture, with its own set of unwritten rules and regulations. Thus I am more likely to evade not only because I have friends who, I know, have got away with it (so why shouldnôt I?) but also because evasion is ethically acceptable among my friends é Furthermore, óno friends of mine can be criminalsô é óWhatôs good enough for fine, upstanding citizens like Fred Bloggs, John Doe, Donald Campbell, Herman Schmitt and Hans Anderson is good

enough for meõò. Thus, tax morale is shaped by social interactions (Frey and Torgler 2007), as are tax decisions (Fortin, Lacroix and Villeval 2007). The importance of social interactions has also been covered in the crime literature (see, e.g. Kahan 1997).

Historically, Hayoz and Hug (2007) point out that many nations have failed to improve tax compliance as they focused entirely on coercion and repression without encouraging voluntary compliance. Hayoz and Hug (2007) emphasize that this means that nations ñare weak with regards to their *political* capacity to rely on voluntary complianceò (p. 9).

In sum, the finding that tax morale matters means that the enhancement of tax morale becomes a desirable policy instrument to complement the usual enforcement options (Torgler 2011). In this analysis, we will therefore investigate closely the implications of political capacity on tax morale. If a tax administration or a government is serious about increasing or maintaining tax compliance in a sustainable way, they cannot get away with neglecting tax morale. Enacting policies based on ñshort-cutsò that do not take into account the complexity of the tax compliance decision process may have a devastating effect. We argue that there may be a significant payoff from investing heavily in understanding tax morale in Papua New Guinea, one that such understanding could lead to a far more sustainable future for PNG.

2. THE INSTITUTIONAL ARCHITECTURE AND GOVERNANCE QUALITY[1]

Humans are (on average) moral beings. However, until now we have only had limited knowledge regarding the foundation of experiencing moral costs when faced with both minor and major decisions about whether or not to comply with rules or norms. Moral costs act as a disincentive to evade taxes. There is now neuro-scientific evidence that indicates that taxpayers experience moral costs and that such moral costs have a positive impact on tax compliance (Dulleck et al. 2012).

In a previous report we demonstrated a robust relationship between tax evasion and institutional or governance quality (Increasing Tax Compliance in Papua New Guinea). Can we observe that such institutional conditions directly shape tax morale? There is some evidence on this topic, with detailed studies available for European countries (Frey and Torgler 2007, Torgler 2005b). In this study we employ the latest available data on tax morale (recently released by the World Values Survey (wave 6, 2010-2014) to explore how institutional and governance conditions matter. In addition, we also look at the impact of income inequality and ethnic fractionalisation. In our first report we provided a detailed discussion regarding why institutions and governance matter. To avoid repeating ourselves, here are the key points in a nutshell: The political equilibrium position reflects the balance of political forces and institutions (Bird, Martinez-Vazquez, and Torgler 2006). Taxes are the price paid for government services and taxpayers are generally sensitive to the way the government uses tax revenues. Therefore, taxpayers perceive their relationship with the state not only as a relationship of coercion, but also as one of exchange. If citizens perceive that their interests (preferences) are properly represented in political institutions and that they receive an adequate supply of public goods, their identification with the state increases along with their willingness to pay taxes. On the other hand, an inefficient state where corruption is rampant will spawn citizens with little trust in authority and thus a low incentive to cooperate. Citizens will feel cheated if they believe that corruption is widespread, their tax burden is not spent well, their government lacks accountability, and that they are not protected by the rules of law. In other words, a more encompassing and legitimate state increases citizensô willingness to contribute.

Here, we employ the latest WVS wave 6 to explore empirically whether trust matters. There is already substantial evidence demonstrating that vertical trust (trust between taxpayers and the state) is extremely important (Torgler 2007, Frey and Torgler 2007). Positive actions by the state improve taxpayersô tax morale and their commitment to the tax system. If the state acts in a trustworthy way, taxpayers are more willing to comply with taxes. Our focus is on trust in the government. For example, Hanousek and Palda (2004) use Eastern European data and find strong support for the proposition that there is a positive correlation between tax evasion and the perceived government services based on the taxes paid.

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[1] For a more detailed discussion of the aspects discussed here see, in particular, Torgler (2011) and to some extent Torgler (2007).

In general, the tax culture has a substantial effect on the style of the enforcement efforts (Cummings et al. 2009). In our first report regarding PNG, we observed that the tax administration is crucial to the understanding of tax compliance. There is evidence at the micro (individual) level from studies in the US and Turkey (Torgler et al. 2008) that indicate that positive attitudes towards the tax authority (e.g. how taxpayers rated tax administration jobs, their honesty and fairness, and their helping and information behaviour) and the tax system significantly increase tax morale. It is also worth considering the statement by Smith (1992): ñcycles of antagonism between the tax administration and the taxpayer might begin to break with a positive concession by the administratorò (p. 226). He suggested that a respectful and fair treatment of taxpayers produces respect for the tax system and thus leads to co-operation.

In a first report (Increasing Tax Compliance in Papua New Guinea) we discussed the studies by Feld and Frey (2002a, 2002b), which found that institutional conditions (level of direct democracy) influence how tax authorities behave. The authors stress that tax morale is supported or even increased when tax officials treat taxpayers with respect and is reduced when the administration considers taxpayers as individuals who have to be *forced* to pay taxes. Their empirical analysis shows that treating taxpayers respectfully reduces tax evasion. Alm and Torgler (2006) analyse data from Europe and the US and find that the highest tax morale is observed in the US and Switzerland, two countries with very strong democratic traditions. Using Swiss survey data, Torgler (2005b) also finds that a higher level of direct democracy leads to higher tax morale. Several studies on voting and tax compliance, such as Alm, McClelland, and Schulze (1999), Feld and Tyran (2002) and Torgler and Schaltegger (2005) have used experimental methods to demonstrate that voting on tax issues has a positive effect on tax compliance.

The link between local autonomy and tax morale and tax compliance has been also analysed recently (Torgler, Schneider and Schaltegger 2010). The advantage of smaller structures in tax policy is that citizensô preferences are able to be better served than in a framework where a uniform tax system is designed for a population with heterogeneous preferences. One of the strengths of a decentralised system is greater transparency between the tax system and the public services received. It has been established that taxes are comparable to prices in some sense, especially at the local level (Blankart 2002).

In general, the political process is often biased toward instruments that provide fast responses. This bias is partially driven by the (short) election cycle, and the resulting pressure on politicians to be re-elected. However, sustainability requires a long-term vision. Therefore, it is worth exploring whether tax morale is capable of changing quickly, sometimes even within one or two election cycles. The literature so far indicates that this is indeed the case.

In a quasi-natural experiment investigating German reunification over different time periods (Torgler 2004, Feld et al. 2008) we observe a strong convergence of tax morale between East and West Germany within a short period of time. Such a quasi-natural experiment provides valuable insights for a tax morale analysis because many factors can be controlled (similar factors in East and West Germany: a common language, similar education systems, and a shared cultural and political history after the Second World War

and prior to the separation). As a consequence, an East-West Germany comparison has a methodological advantage over cross-country studies. Through the results of this study, it is possible to observe how taxpayers adapt to a new institutional environment. As the Iron Curtain fell, former German Democratic Republic (GDR) citizens became exposed to the West German system, including the social welfare state, the tax system, and the whole set of formal and informal rules. Feld et al.ôs (2008) findings indicate that tax morale converged rapidly after the unification in Germany. While tax morale was significantly and substantially different in East and West Germany in 1990, the regions did not differ significantly in their tax morale levels in 1999. Within a period of only nine years, tax morale values had converged after unification, due in particular to a significant change in the level of tax morale in the East.

Martinez-Vazquez and Torgler (2009) investigate the development of tax morale in Spain, as the country has undergone fundamental changes in the public sector since its transition to a democratic system after the death of General Francisco Franco in 1975. Their results indicate that during the post-Franco period Spain successfully designed general institutional reforms, including tax policy and tax administration reforms that led to significant increases in tax morale, even though some deterioration of tax morale occurred between the 1995 and 1999/2000 observations. Alm, Martinez-Vazquez and Torgler (2006) conducted a study on Russian data during the years 1991, 1995, and 1999 to examine how tax morale changed during the tumultuous events of the 1990s. Overall, in the first years of the transition, Russia did not succeed in designing tax systems, tax administrations, or other government structures and institutions (especially improved public service delivery) that would have helped to maintain tax morale. Even so, there was an improvement in tax morale from 1995 to 1999. Finally, as discussed in the first report, improvements in the tax administration can have a positive influence on tax morale over time (Torgler and Murphy 2004).

We use the same institutional proxies as when investigating tax evasion. For the sake of clarity, we briefly report here a discussion of the variables analysed in the first report. The first variable measuring institutional quality is derived from data in the International Country Risk Guide (ICRG). The ICRG specifically focuses on aspects affecting private foreign investment decisions (see Knack 1999). The rating is comprised of 22 variables in three subcategories of risk: political, financial, and economic. We focus on the political risk component, measured by BUREAUCRATIC QUALITY[2], CORRUPTION[3],

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[2] Institutional strength and quality of the bureaucracy: ñHigh points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low-risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training. Countries that lack the cushioning effect of a strong bureaucracy receive low pointsò.

[3] Assessment of corruption within the political system. Lower scores indicate "high government officials are likely to demand special payments" and that "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, police protection, or loans."

DEMOCRATIC ACCOUNTABILITY[4], GOVERNMENT STABILITY[5], LAW & ORDER[6], and INTERNAL[7] or EXTERNAL[8] CONFLICT. A higher number of points indicates a lower potential risk and therefore higher scores are correlated with a higher institutional and governance quality.

We also employ the *Quality of Governance Index* introduced by Kaufmann, Kraay, and Mastruzzi (2003)[9] as another proxy for governance and institutional quality. It allows us to focus on the:

1) Process by which governments are selected, monitored and replaced:
   - VOICE AND ACCOUNTABILITY: measures the political process, civil liberties, and political rights, and
   - POLITICAL STABILITY AND ABSENCE OF VIOLENCE: measures perceptions of the likelihood that the government will be destabilised/overthrown.
2) Capacity of the government to effectively formulate and implement sound policies:
   - GOVERNMENT EFFECTIVENESS (inputs required for the government to be able to produce and implement good policies and deliver public goods), and
   - REGULATORY QUALITY (focuses more on policies, such as the incidence of market-unfriendly policies, perceptions of the burdens imposed by excessive regulation).
3) Respect of citizens and the state for the institutions that govern economic and social interactions
   - RULE OF LAW (several indicators measuring the degree of agentsô confidence in and compliance with the rules of society). According to Kaufmann et al. (2003:4) these indicators ñmeasure the success of a society in developing an environment in which fair and predictable rules form the basis of economic and social interactionsò, and
   - CONTROL OF CORRUPTION: measures the perceived corruption (exercise of public power for private gain).

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[4] Measures the level of responsiveness of a government to its people.

[5] Assessment of the governmentôs ability to carry out its declared program(s), and its ability to stay in office (subcomponents: government unity, legislative strength and popular support).

[6] The ólawô sub-component measures the strength and impartiality of the legal system, while the órderô sub-component is an assessment of popular observance of the law.

[7] Assessment of the political violence in a country and its actual or potential impact on governance (sub-groups: civil war/coup threat, terrorism/political violence, civil disorder).

[8] External conflict is measured as ñan assessment of the risk to both the incumbent government and inward investment. It ranges from trade restrictions and embargoes, whether imposed by a single country, a group of countries, or the whole international community, through geopolitical disputes, armed threats, exchanges of fire on borders, border incursions, foreign-supported insurgency, and full-scale warfareò.

[9] See also Kaufmann, Kraay and Mastuzzi (2003, 2004).

All estimated scores lie between ï 2.5 and 2.5, with higher scores corresponding to better institutions (governance outcomes).

We also look at the role of national pride. Macintyre and Torgler (2014) explore in detail the theoretical and empirical relationship between national pride and compliance. Their results indicate that government activities or expenditures that encourage national pride are, as they stress, money well spent. Previous studies have also demonstrated that national pride has a positive impact on tax compliance (for an overview see Torgler 2007).

In addition, we explore the impact of income inequality, which is a crucial issue in PNG. As we established in the first report, income inequality is correlated with higher tax evasion and lower tax performance. Furthermore, as noted in the first report, income inequality may be associated with political instability and lower levels of trust in institutions, and even with less solidarity within society. We also investigate closely the phenomenon known as fractionalisation. Using cross-country analysis, the results of our first report indicated that ethnic tension is a problem. To deepen our understanding, we analyse data provided by Alesina et al. (2003) on ethnic, linguistic, and religious fractionalisation. The measurement of language fractionalisation is based entirely on data from the Encyclopaedia Britannica (2001), which reports the proportion of languages spoken (classified as mother tongue) based on countriesô census data (with a total of 1055 linguistic clusters for 201 countries). Data on religious fractionalisation was also derived from the Encyclopaedia Britannica (2001) (294 religions, 215 countries). Finally, ethnic fractionalisation, the main variable in the study by Alesina et al. (2003), is a combination of linguistic and racial attributes. They used various sources (Encyclopaedia Britannica 2001, CIA World Factbook, Minority Rights Group International, the Ethnologue project) and contacted certain countries directly to obtain the relevant data necessary for the study on ethnicity. They find that contrary to religious fractionalisation, ethnic and linguistic fractionalisations are associated with negative outcomes (quality of governance). Based on these results, the authors argue that religious fractionalisation is a sign that the society is more tolerant and free.

Figure 1: FractionaliSation and Tax Evasion (Alm and Embaye 2013)

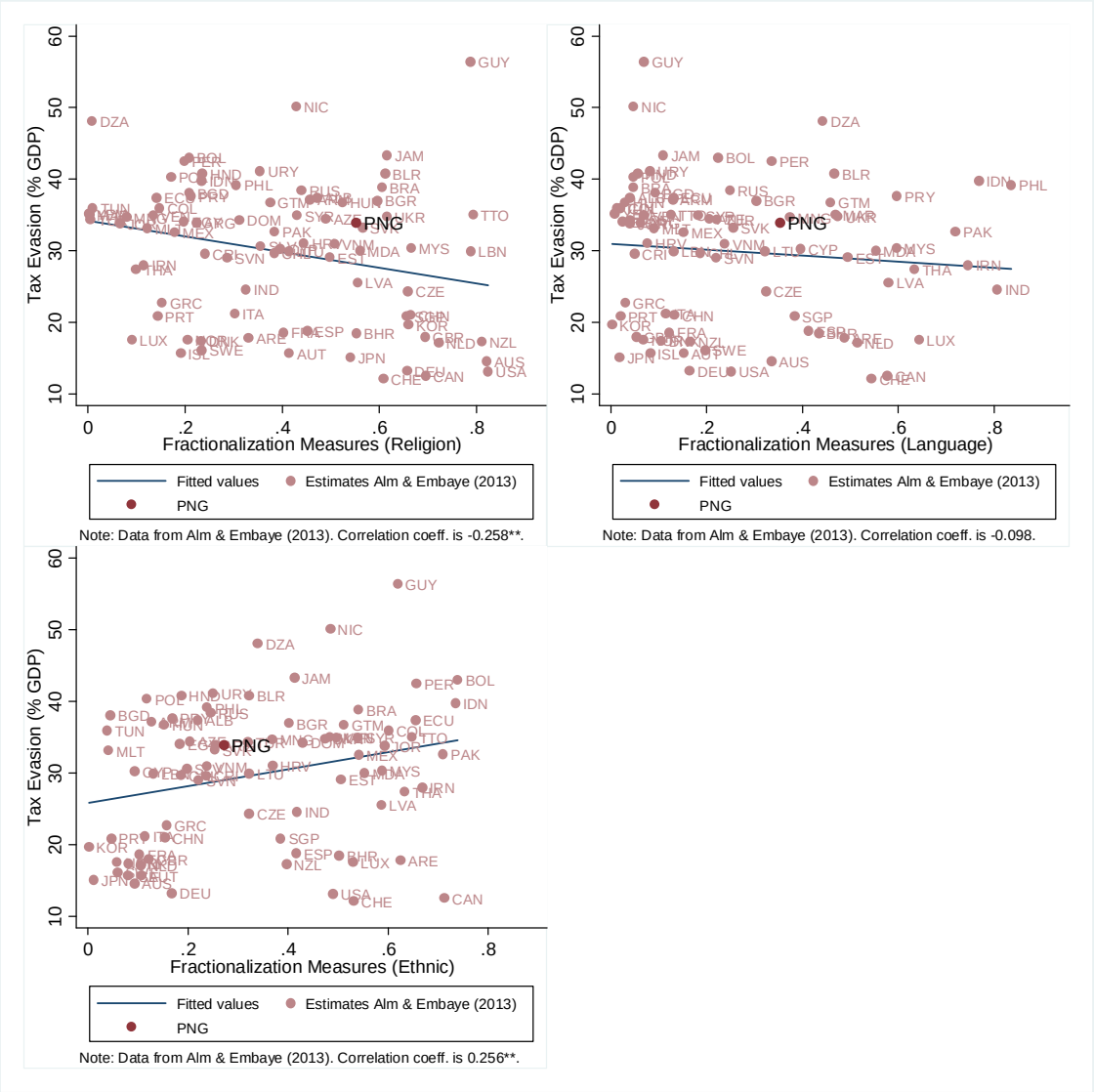


Figure 2: Fractionalisation and Tax Evasion (Elgin and öztunah 2012)

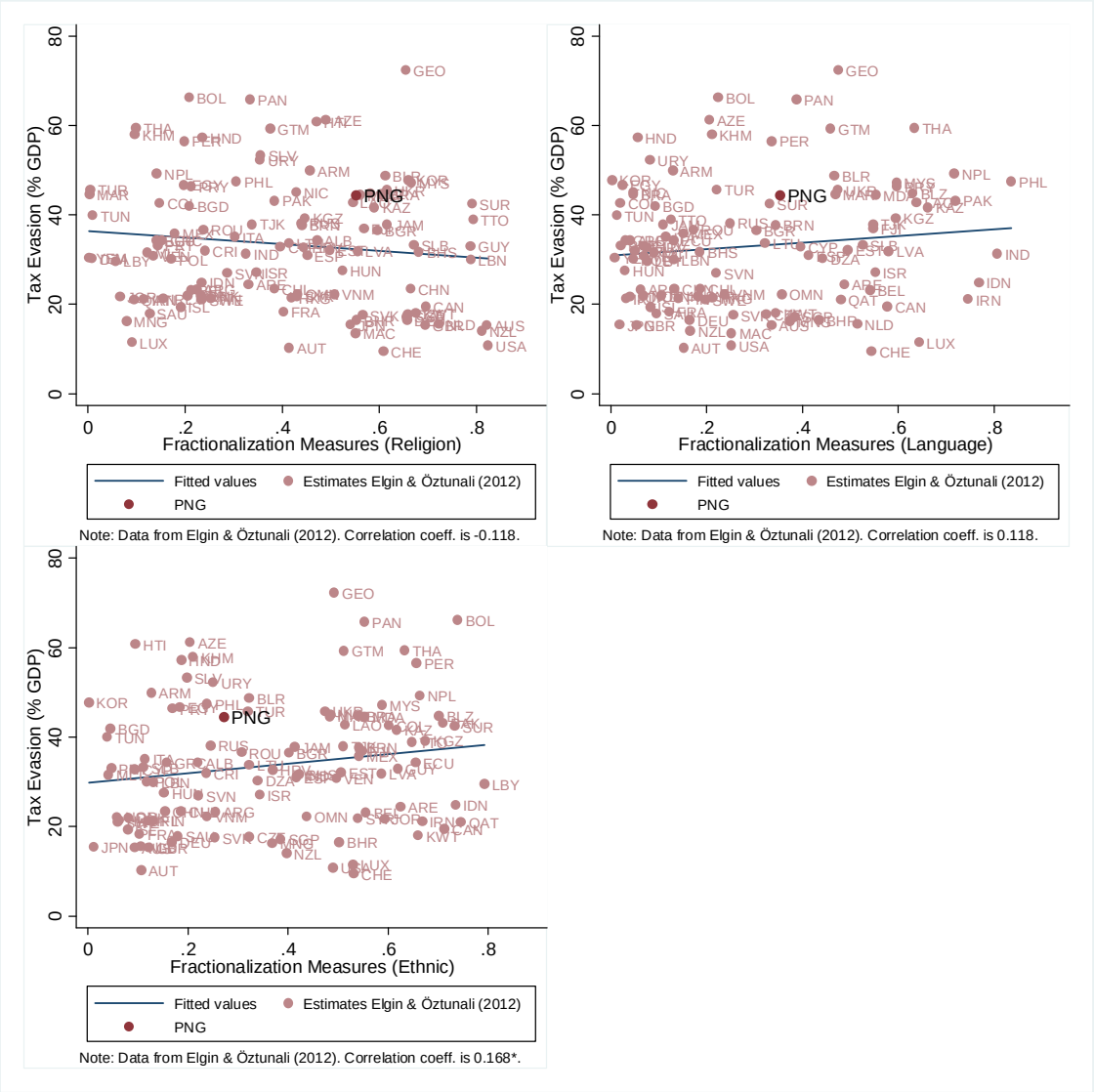
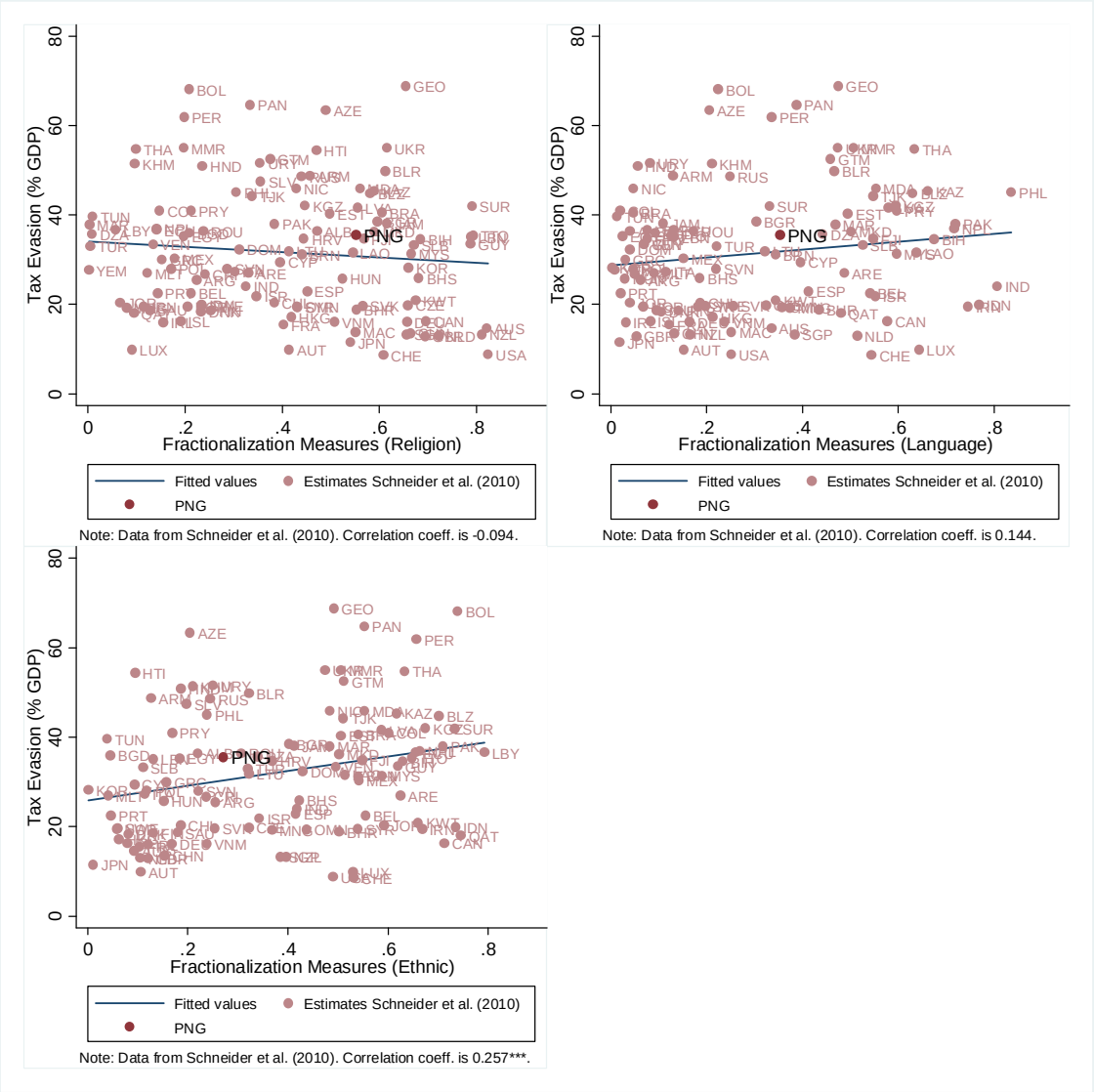


Figure 3: Fractionalisation and Tax Evasion (Schneider et al. 2013)



The results reported in Figure 1, 2 and 3 are in line with the findings from Alesina et al. (2003). The correlation between tax evasion and ethnic fractionalisation is positive and statistically significant using each of the three tax evasion proxies discussed in our first report[10]. On the other hand, there is a negative correlation between religious fractionalisation and tax evasion, but this is only statistically significant when using the Alm and Embaye (2013) tax evasion proxy. The correlation between language and tax evasion is never statistically significant.

[10] For a discussion how tax evasion has been measured see our first report.

3. EMPIRICAL FINDINGS ON TAX MORALE

As mentioned, we use the newest wave of the World Values Survey (WVS) released on April 28th 2014. Several studies have used the World Values Survey (WVS) to generate a proxy for tax morale (for an overview see, e.g. Torgler 2007). The WVS is a worldwide investigation of socio-cultural and political change, collecting comparative data on values and belief systems among people from around the world. WVS builds on the European Values Surveys (EVS), first carried out in 1981-1984. These WVS surveys assess the basic values and beliefs of people and have been carried out in about 80 societies representing over 80 per cent of the worldôs population. This large data set therefore permits cross-country comparison of peopleôs tax morale that is based on representative national samples. To assess the level of tax morale we work with the following question:

> ñPlease tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: é Cheating on tax if you have the chanceò. The question leads to a ten scale index of tax morale with the two extreme points ñnever justifiedò and ñalways justifiedò.

The ten-point scale has been recoded into a four-point scale (0, 1, 2, 3), with the value 3 standing for ñnever justifiableò. The values for 4-10 have been integrated in the value 0 due to a lack of variance. This is a common approach in the tax morale literature (see, e.g. Torgler 2007).

However, using a single variable is also problematic and has been discussed in the past in various studies (for an overview see Torgler 2011). Nevertheless, it is an important consideration and thus might be worth discussing again. In general, extracting data only from a single question in the WVS reduces problems of complexity inherent in the construction of an index, especially regarding the measurement procedure or a low correlation between the items[11]. Even so, one should recognize that there are some good reasons to use a multi-item index instead of a single question to measure tax morale.[12] Tax morale is likely to be a multi-dimensional concept, which may require a multi-item measurement tool, as is the case in psychometric studies. In this context, a single-item measure like ours has some disadvantages compared to a multi-item index (Lewis 1982, Jackson and Milliron 1986). For example, it may be difficult for a single-item measure to adequately capture the interrelated facets of tax morale, and may also be adversely affected by random errors in measurement. Further, the advantage of a multi-item index is that errors should tend to average out, therefore producing a more reliable measure. Compared to a single-item measure, a multi-item index likely provides better score reliability by pooling together information that the items have in common; a multi-item tool also increases validity by providing a more representative sample of information

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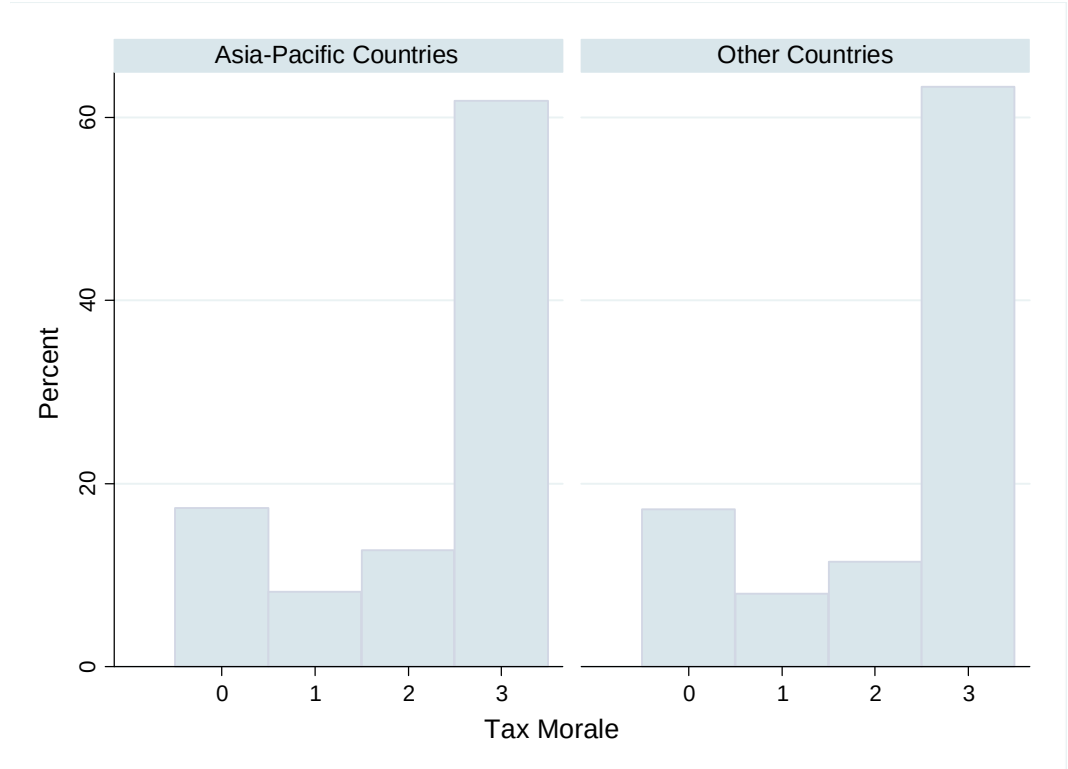
[11] For a discussion of the shortcomings and advantages of survey data in relation to other approaches see Torgler (2007).

[12] For example, Kirchler (1997, 1999) uses several items to measure tax morale. He confronted subjects with various scenarios, in which a fictitious individual overspends/underreports income on a tax return. After reading the scenarios, subjects could express their disagreement with or acceptance of tax evasion.

about the underlying concept, and it increases precision by decreasing score variability (see Torgler, Schaffner, and Macintyre 2010 for an index study).

We employ commonly used control variables in the tax morale regression; for example, the age structure (dummies, AGE below 30 as the reference group), gender, marital status (reference group: single), the employment status (dummy for being self-employed) and the socio-economic condition (lower socio-economic class in the reference group). Age might be particularly interesting in this analysis as PNG has a relatively young population structure with 55 per cent of the population aged 25 or younger and only 7 per cent older than 55[13].

Figure 4: Tax Morale in Asia-Pacific Countries and Beyond



Note: 3=highest tax morale, 0=lowest tax morale.

In sum, we have analysed a large database of 41 countries covering between 44,051 and 52,067 people (see Appendix Table A1 for a list of the countries). We first present a descriptive analysis indicating the differences in tax morale between Asia-Pacific countries and other countries (see Figure 1). Although we are not able to explore data for PNG directly, such results from the local geographic region that PNG belongs to could be

[13] See https://www.cia.gov/library/publications/the-world-factbook/fields/2010.html#pp (CIA World Factbook, accessed on 21.05.2014).

relevant for PNG nonetheless. In general, we observe that the results are skewed to the right (larger numbers of individuals report that tax morale is never justified (more than 60 per cent)). Using a two-sample Wilcoxon Rank-sum test indicates that the difference between Asia-Pacific countries and all other countries is statistically significant. Thus, tax morale appears to be lower in Asia-Pacific countries than in all the other countries (z = 2.362). However, this result only offers information about the raw effects and not the partial effects. Thus, a multivariate analysis will provide further insights.

Table 1: Tax Morale and Governance (ICRG)

Dep. Variable - Tax Morale	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Confidence: Government	0.021***	0.033***	0.019***	0.004	0.013**	0.010	0.008	0.008
	(3.40)	(5.30)	(3.19)	(0.68)	(2.17)	(1.63)	(1.32)	(1.31)
	0.017	*0.026*	*0.016*	*0.003*	*0.011*	*0.008*	*0.006*	*0.006*
National Pride	0.203***	0.189***	0.186***	0.190***	0.206***	0.191***	0.203***	0.190***
	(24.68)	(22.99)	(22.68)	(22.95)	(24.47)	(23.08)	(24.41)	(22.96)
	0.124	*0.116*	*0.114*	*0.116*	*0.126*	*0.117*	*0.125*	*0.116*
ICRG								
Corruption	0.119***							
	(22.29)							
	0.116							
Democratic Accountability		0.060***						
		(16.41)						
		0.085						
Quality of Bureaucracy			0.107***					
			(17.40)					
			0.094					
Government Stability				0.016***				
				(3.86)				
				0.019				
Law and Order					0.052***			
					(10.26)			
					0.052			
Ethnic Tensions						0.015***		
						(3.17)		
						0.015		
Internal Conflict							0.043***	
							(11.36)	
							0.059	
External Conflict								-0.020***
								(-4.22)
								-0.020
Asia-Pacific	-0.119***	-0.030**	-0.137***	-0.027**	-0.060***	-0.040***	-0.067***	-0.023*
	(-8.51)	(-2.24)	(-9.34)	(-2.01)	(-4.34)	(-2.88)	(-4.83)	(-1.72)
	-0.044	*-0.011*	*-0.051*	*-0.010*	*-0.022*	*-0.015*	*-0.025*	*-0.009*
Age Group								
30 to 49	0.107***	0.121***	0.117***	0.133***	0.121***	0.130***	0.123***	0.133***
	(6.35)	(7.13)	(6.95)	(7.85)	(7.11)	(7.69)	(7.28)	(7.87)
	0.045	*0.050*	*0.049*	*0.055*	*0.050*	*0.054*	*0.051*	*0.055*
50 to 64	0.196***	0.226***	0.218***	0.249***	0.225***	0.244***	0.227***	0.251***
	(10.52)	(12.16)	(11.73)	(13.41)	(12.00)	(13.12)	(12.15)	(13.52)

	0.071	*0.081*	*0.079*	*0.090*	*0.081*	*0.088*	*0.082*	*0.090*
>65 and up	0.269***	0.322***	0.309***	0.369***	0.327***	0.361***	0.326***	0.376***
	(12.56)	(15.21)	(14.57)	(17.62)	(15.34)	(17.21)	(15.34)	(17.90)
	0.078	*0.093*	*0.089*	*0.107*	*0.095*	*0.105*	*0.095*	*0.109*
Female	0.092***	0.093***	0.092***	0.095***	0.094***	0.095***	0.093***	0.096***
	(8.09)	(8.16)	(8.15)	(8.33)	(8.32)	(8.35)	(8.22)	(8.43)
	0.039	*0.040*	*0.040*	*0.041*	*0.040*	*0.041*	*0.040*	*0.041*
Marital Status								
Widowed	0.011	-0.028	1.08e-04	-0.060**	-0.038	-0.056**	-0.051*	-0.064**
	(0.41)	(-1.02)	(0.00)	(-2.20)	(-1.39)	(-2.03)	(-1.84)	(-2.33)
	0.002	*-0.006*	*2.27e-05*	*-0.013*	*-0.008*	*-0.012*	*-0.011*	*-0.013*
Divorced/separated	-0.071***	-0.076***	-0.065**	-0.078***	-0.069**	-0.073***	-0.085***	-0.072***
	(-2.67)	(-2.85)	(-2.44)	(-2.93)	(-2.57)	(-2.71)	(-3.16)	(-2.71)
	-0.015	*-0.016*	*-0.014*	*-0.016*	*-0.014*	*-0.015*	*-0.018*	*-0.015*
Married	0.055***	0.039**	0.048***	0.028*	0.040**	0.032*	0.033**	0.027*
	(3.33)	(2.38)	(2.94)	(1.73)	(2.41)	(1.94)	(1.98)	(1.65)
	0.023	*0.016*	*0.020*	*0.012*	*0.016*	*0.013*	*0.013*	*0.011*
Self Employed	0.048***	-0.010	0.027	0.006	0.030	0.005	0.034*	5.55e-05
	(2.66)	(-0.56)	(1.47)	(0.33)	(1.63)	(0.30)	(1.87)	(0.003)
	0.013	*-0.003*	*0.007*	*0.002*	*0.008*	*0.001*	*0.009*	*1.49e-05*
Social Class								
Working class	0.012	0.027	0.027	0.036*	0.016	0.034*	0.011	0.037*
	(0.59)	(1.33)	(1.32)	(1.76)	(0.76)	(1.67)	(0.55)	(1.80)
	0.005	*0.011*	*0.011*	*0.014*	*0.006*	*0.013*	*0.004*	*0.015*
Upper and lower middle class	-0.046**	-0.024	-0.033*	-0.007	-0.034*	-0.011	-0.034*	-0.009
	(-2.37)	(-1.24)	(-1.69)	(-0.38)	(-1.74)	(-0.56)	(-1.76)	(-0.46)
	-0.019	*-0.010*	*-0.014*	*-0.003*	*-0.014*	*-0.005*	*-0.015*	*-0.004*
Upper class	-0.257***	-0.245***	-0.269***	-0.246***	-0.259***	-0.246***	-0.262***	-0.243***
	(-4.91)	(-4.70)	(-5.11)	(-4.68)	(-4.92)	(-4.66)	(-4.99)	(-4.61)
	-0.027	*-0.026*	*-0.028*	*-0.026*	*-0.027*	*-0.026*	*-0.027*	*-0.025*
N	49230	49230	49230	49230	49230	49230	49230	49230
Prob. > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R-squared	0.039	0.035	0.035	0.028	0.030	0.028	0.031	0.028

Notes: * p<0.1, ** p<0.05, *** p<0.01; t statistics in parentheses; beta coefficient in italics.

We first report the outcomes of OLS regressions[14]. We decided to run OLS in order to report the beta/standardised coefficients and therefore to clearly observe the relative strength of the different variables. In other words, standardised coefficients display the results using a unified metric, namely standard deviation units. This is particularly useful for policy analysis. Table 1 and 2 present the results using ICRG and Quality of Governance data. The results are striking. All the institutional variables are statistically significant at the one per cent level. The beta coefficients indicate that governance factors have a strong impact relative to the other variables included in the specification. For example, specification 1 in Table 1 indicates that a one standard deviation decrease in corruption leads to 0.124 standard deviation increase in tax morale. Comparing the

[14]Conducting ordered probit models to deal with the ranking information of the scaled dependent variables hardly changes the results.

different specifications from Table 1, we observe that corruption has the strongest influence on tax morale, followed by the quality of the bureaucracy, and democratic accountability.

Table 2: Tax Morale and Governance (Quality of Governance Indicators)

Dep. Variable - Tax Morale	(1)	(2)	(3)	(4)	(5)	(6)
Confidence: Government	0.023***	0.048***	0.023***	0.030***	0.026***	0.007
	(3.60)	(7.31)	(3.64)	(4.59)	(4.10)	(1.17)
	0.019	*0.039*	*0.019*	*0.024*	*0.021*	*0.006*
National Pride	0.185***	0.178***	0.179***	0.175***	0.187***	0.188***
	(21.35)	(20.62)	(20.73)	(20.28)	(21.57)	(21.53)
	0.113	*0.109*	*0.109*	*0.107*	*0.114*	*0.115*
Quality of Governance Indicators						
Control of Corruption	0.128***					
	(22.11)					
	0.129					
Voice and Accountability		0.149***				
		(24.58)				
		0.134				
Government Effectiveness			0.167***			
			(23.48)			
			0.141			
Regulatory Quality				0.156***		
				(22.53)		
				0.128		
Rule of Law					0.145***	
					(23.49)	
					0.137	
Political Stability						0.099***
						(14.54)
						0.082
Asia-Pacific	-0.182***	-0.104***	-0.219***	-0.164***	-0.185***	-0.120***
	(-11.91)	(-7.29)	(-13.93)	(-11.02)	(-12.19)	(-8.02)
	-0.068	*-0.039*	*-0.081*	*-0.061*	*-0.069*	*-0.045*
Age Group						
30 to 49	0.094***	0.094***	0.094***	0.099***	0.091***	0.107***
	(5.31)	(5.31)	(5.33)	(5.61)	(5.13)	(6.06)
	0.039	*0.039*	*0.039*	*0.041*	*0.038*	*0.045*
50 to 64	0.198***	0.198***	0.197***	0.205***	0.191***	0.220***
	(10.14)	(10.17)	(10.16)	(10.55)	(9.80)	(11.25)
	0.071	*0.071*	*0.071*	*0.074*	*0.069*	*0.079*
>65 and up	0.253***	0.250***	0.255***	0.267***	0.246***	0.297***
	(11.24)	(11.15)	(11.41)	(11.95)	(10.94)	(13.22)
	0.074	*0.073*	*0.075*	*0.078*	*0.072*	*0.087*
Female	0.087***	0.087***	0.085***	0.087***	0.086***	0.087***
	(7.32)	(7.35)	(7.20)	(7.31)	(7.29)	(7.29)
	0.037	*0.037*	*0.037*	*0.037*	*0.037*	*0.037*
Marital Status						
Widowed	-0.030	-0.034	-0.021	-0.030	-0.026	-0.083***
	(-1.02)	(-1.18)	(-0.72)	(-1.02)	(-0.90)	(-2.85)

	-0.006	*-0.007*	*-0.004*	*-0.006*	*-0.006*	*-0.018*
Divorced/separated	-0.090***	-0.094***	-0.086***	-0.090***	-0.088***	-0.105***
	(-3.23)	(-3.40)	(-3.08)	(-3.24)	(-3.17)	(-3.75)
	-0.019	*-0.020*	*-0.018*	*-0.019*	*-0.019*	*-0.023*
Married	0.029*	0.030*	0.032*	0.030*	0.033*	0.011
	(1.67)	(1.74)	(1.85)	(1.71)	(1.88)	(0.65)
	0.012	*0.012*	*0.013*	*0.012*	*0.013*	*0.005*
Self Employed	0.033*	0.008	0.024	0.014	0.033*	0.026
	(1.65)	(0.42)	(1.21)	(0.72)	(1.66)	(1.29)
	0.008	*0.002*	*0.006*	*0.004*	*0.008*	*0.007*
Social Class						
Working class	-0.011	-0.002	-0.006	0.001	-0.014	-0.016
	(-0.50)	(-0.10)	(-0.27)	(0.06)	(-0.63)	(-0.74)
	-0.004	*-0.001*	*-0.002*	*0.001*	*-0.006*	*-0.007*
Upper and lower middle class	-0.075***	-0.068***	-0.072***	-0.065***	-0.079***	-0.065***
	(-3.52)	(-3.21)	(-3.38)	(-3.05)	(-3.70)	(-3.04)
	-0.032	*-0.029*	*-0.030*	*-0.027*	*-0.033*	*-0.028*
Upper class	-0.233***	-0.227***	-0.229***	-0.227***	-0.229***	-0.241***
	(-4.70)	(-4.59)	(-4.63)	(-4.60)	(-4.63)	(-4.85)
	-0.027	*-0.026*	*-0.026*	*-0.026*	*-0.026*	*-0.028*
N	44051	44051	44051	44051	44051	44051
Prob. > F	0.000	0.000	0.000	0.000	0.000	0.000
R-squared	0.037	0.039	0.039	0.037	0.039	0.029

Notes: * p<0.1, ** p<0.05, *** p<0.01; t statistics in parentheses; beta coefficient in italics.

In Table 2 government effectiveness exerts the strongest effect, followed by rule of law and voice and accountability. After controlling for several variables, Asia-Pacific countries again show lower levels tax morale than the countries in the reference group (all others). This indicates potential for improvement in tax morale in the Asia-Pacific region through tax and policy reforms. Another striking result is the strong effect of national pride throughout all estimations. The relative effects are quite significant (strongest in Table 1). Thus, a better understanding of the factors driving national pride could help to achieve better cooperation within a society. Confidence in the government is also positively correlated with tax morale. However, the variable is not significant throughout all specifications. One reason could be that some of the institutional/governance variables catch part of the effect of trust in the government. Other variables return the expected sign; for example, age is positively correlated with tax morale, and the quantitative effect increases for higher age categories. This could have particular implications for PNG as a country with a young population. The challenge is to find ways of increasing tax morale among young people[15]. Females have higher tax morale than males, and married people report a higher level of tax morale than singles. In addition, economic status is negatively correlated with tax morale. Surprisingly, there is a trend for self-employed people to report, *ceteris paribus*, higher tax morale: although one should note that the coefficient is not always statistically significant.

[15] For a discussion of the reasons for an age effect in the area of compliance (in particular corruption) see Torgler and Valev (2006).

Table 3: Tax Morale, Fractionalisation and Income Inequality

Dep. Variable - Tax Morale	(1)	(2)	(3)	(4)
Confidence: Government	0.004	0.017***	0.003	-0.019**
	(0.73)	(2.91)	(0.45)	(-2.11)
	0.003	*0.014*	*0.002*	-0.*015*
National Pride	0.191***	0.185***	0.169***	0.183***
	(23.14)	(22.91)	(20.56)	(15.82)
	0.116	*0.112*	*0.102*	0.*114*
Fractionalization				
Ethnic	-0.174***			
	(-6.46)			
	-0.031			
Language		-0.697***		
		(-26.75)		
		-0.127		
Religion			-0.253***	
			(-10.39)	
			-0.053	
Gini Coefficient				-0.008***
				(-6.58)
				-0.*045*
Asia-Pacific	-0.034**	0.005	0.039***	0.091***
	(-2.50)	(0.36)	(2.72)	(5.19)
	-0.012	*0.002*	*0.014*	0.*035*
Age Group				
30 to 49	0.121***	0.118***	0.129***	0.151***
	(7.42)	(7.28)	(7.90)	(6.06)
	0.050	*0.049*	*0.054*	0.*063*
50 to 64	0.234***	0.225***	0.254***	0.318***
	(12.93)	(12.59)	(14.07)	(11.89)
	0.083	*0.080*	*0.091*	0.*117*
>65 and up	0.350***	0.339***	0.383***	0.445***
	(16.98)	(16.78)	(18.61)	(15.18)
	0.100	*0.097*	*0.109*	0.*137*
Female	0.091***	0.092***	0.090***	0.095***
	(8.22)	(8.40)	(8.11)	(5.95)
	0.039	*0.039*	*0.038*	0.*041*
Marital Status				
Widowed	-0.077***	-0.050*	-0.081***	-0.068*
	(-2.86)	(-1.89)	(-2.99)	(-1.79)
	-0.016	*-0.010*	*-0.017*	-0.*015*
Divorced/separated	-0.069***	-0.057**	-0.063**	-0.115***
	(-2.64)	(-2.19)	(-2.39)	(-3.09)
	-0.014	*-0.012*	*-0.013*	-0.*026*
Married	0.023	0.037**	0.020	0.038
	(1.41)	(2.33)	(1.23)	(1.57)
	0.009	*0.015*	*0.008*	0.*016*

Self Employed	0.021	0.035**	-0.023	-0.043
	(1.17)	(2.00)	(-1.31)	(-1.40)
	0.006	*0.009*	*-0.006*	-0.*010*
Social Class				
Working class	0.013	0.042**	0.034*	0.004
	(0.63)	(2.10)	(1.67)	(0.13)
	0.005	*0.017*	*0.013*	0.*002*
Upper and lower middle class	-0.029	0.004	-0.006	-0.022
	(-1.52)	(0.22)	(-0.29)	(-0.63)
	-0.012	*0.002*	*-0.002*	-0.*009*
Upper class	-0.235***	-0.161***	-0.209***	-0.283***
	(-4.89)	(-3.39)	(-4.33)	(-3.95)
	-0.026	*-0.018*	*-0.023*	-0.*032*
N	52067	52067	52067	24779
Prob. > F	0.000	0.000	0.000	0.000
R-squared	0.026	0.041	0.027	0.037

Notes: * p<0.1, ** p<0.05, *** p<0.01; t statistics in parentheses; beta coefficient in italics.

In Table 3 we explore the impacts of fractionalisation and income inequality. Here the results are highly statistically significant with a negative sign for all three fractionalisation proxies. This can be contrasted with the results on tax evasion where the results were only negative for ethnic fractionalisation. When analysing tax morale, the strongest effect is seen with respect to language fractionalisation. This does not necessarily mean that fractionalisation is a bad thing. It only means that institutional conditions need to be adjusted to take into account the heterogeneity within a society. Local autonomy and decentralisation might be a good tool by which to address this issue, and countries such as Switzerland demonstrate a good track record in dealing with, for example, language fractionalisation.

Finally, we take a look at income inequality. In line with the results reported in the first study with respect to tax evasion, we again observe that income inequality is problematic. It reduces tax morale, indicating that the willingness to comply with the tax system is affected by the income inequality structure.

4. CONCLUSIONS

Printed on the cover page of the 2011 Annual Report of the PNG Internal Revenue Commission are the words: ñWe collect taxes to help build PNGò. In the act of collecting taxes it is important to consider the moral dimension of complying with societiesô rules. Tax morale is a key factor that shapes tax compliance in different societies and cultures. In this report we find strong empirical evidence for the proposition that governance and institutional quality matter. A failure to provide adequate institutional quality is punished with lower tax morale. Unfortunately, the World Values Survey data did not include or has not yet released data for PNG in its recent wave. We recommend that the tax administration of PNG conducts surveys on a regular basis, using the Taxpayer Opinion Survey (TOS) as a guideline. This survey was conducted in the US in the late 1980s and collected information on a broad set of taxpayersô opinions, including many aspects such as the tax system, the tax administration, tax evasion, or tax morale. Unfortunately, the TOS has not been used by many researchers (see, e.g., Smith 1992, Sheffrin and Triest, 1992, Forest and Sheffrin 2002; Torgler et al. 2008; Torgler, Schaffner, and Macintyre 2010) and was not conducted after 1990. In addition, we recommend that the PNG tax administration uses a panel data set to monitor tax morale on a yearly basis, therefore tracking the same taxpayers over time. This would offer the opportunity to assess how taxpayers react to internal and external shocks or changes. Such monitoring is already happening in other areas, for example, through the German GSOEP (German Socio-Economic Panel), the British Household Panel Survey, and the Household, Income and Labour Dynamics in Australia (HILDA) Survey. In addition, we recommend the introduction and application of field experiments as an investigative instrument (as discussed in detail in the first report). Such controlled field experiments would allow scientific analysis regarding which instruments shape tax morale and the effectiveness of those instruments. In addition, policies could take a closer look at how social learning influences tax morale.

The policy implications based on our results are no secret. However, they require some willingness to change, along with constant, daily determination and the cooperation of decision makers throughout the entire government structure and beyond. A more legitimate and responsive state appears to be an essential precondition in generating tax morale. Citizens feel cheated if corruption is widespread, their tax burden is not spent well, and that they are not protected by the rule of law. Therefore, taxpayers should be involved wherever possible in the political process, enhancing identification with the stateôs institutions, and counteracting inclinations to be non-compliant. It is important not to concentrate entirely on tax reforms in the attempt to increase tax morale and tax compliance; the tax administration should search for measures that address government effectiveness, voice and accountability, rule of law, quality of the bureaucracy, conflicts (internal, external, and ethnic tensions), and income inequality. Governance provides the foundation for a stable tax system. Tensions due to fractionalisation can be reduced via institutional design (e.g., increasing local autonomy). In addition, quite simply, reciprocity matters. A respectful and fair treatment of taxpayers will be reciprocated by respect for the tax system and thus will lead to co-operation. A solid law and order structure should efficiently target the hard-core and malicious tax evaders. An efficient tax administration uses compliance management and risk control, and structures the

application of enforcement discretion in the right place and at the right time. Strict policies should be directed mainly against dishonest taxpayers. Treating the other taxpayers as responsible persons reduces the taxpayersô incentives to be opportunistic (Frey 1997). The PNG IRC Annual Report 2011 reports the values of the IRC: ñWe foster fairness, respect, professionalism, honesty and opennessò. Applying such values on a daily basis throughout the entire government will foster tax morale in PNG in a sustainable way.

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APPENDIX

Table A1: Countries Investigated

Country	Asia Pacific	Country	Asia Pacific
Algeria		New Zealand	Yes
Armenia		Pakistan	
Australia	Yes	Peru	
Azerbaijan		Philippines	Yes
Belarus		Poland	
Chile		Romania	
China	Yes	Russian Federation	
Colombia		Singapore	Yes
Cyprus		Slovenia	
Ecuador		South Korea	Yes
Egypt, Arab Rep.		Spain	
Estonia		Sweden	
Iraq		Thailand	Yes
Japan	Yes	Trinidad and Tobago	
Kazakhstan		Tunisia	
Lebanon		Turkey	
Kyrgyz Republic		Ukraine	
Malaysia	Yes	United States	
Mexico		Uruguay	
Morocco		Uzbekistan	
Netherlands			

***Notes*:** Countries based on the estimations with the largest amount of observations.

Table A2: Summary Statistics

Variables	Obs.	Mean	Standard Deviation	Min	Max
WVS Data Wave 6					
Tax Morale	57434	2.199	1.170	0	3
Confidence in Government	59966	2.431	0.947	1	4
Pride	60070	3.437	0.716	1	4
Asia-Pacific Dummy	62062	0.225	0.417	0	1
Female	62019	0.533	0.499	0	1
Age	61990	2.253	0.983	1	4
Marital	61851	3.436	0.886	1	4
Employment	60705	2.935	1.050	1	4
Social Class	60379	2.534	0.685	1	4
Quality of Governance Indicators					
Control of Corruption	49953	0.274	1.177	-1.306	2.337
Voice and Accountability	49953	0.045	1.058	-2.071	1.654
Government Effectiveness	49953	0.486	0.970	-1.113	2.152
Regulatory Quality	49953	0.467	0.948	-1.584	1.967
Rule of Law	49953	0.258	1.093	-1.497	1.948
Political Stability No Violence	49953	-0.042	0.960	-2.682	1.374
ICRG Indicators					
Corruption	59062	2.891	1.173	1.154	5.500
Democratic Accountability	59062	4.237	1.651	1.5	6
Quality of Bureaucracy	59062	2.562	1.037	1	4
Government Stability	59062	7.392	1.459	5.077	11.5
Law and Order	59062	3.941	1.182	1.5	6
Ethnic Tension	59062	4.204	1.178	1	6
Internal Conflict	59062	8.848	1.573	5.5	11.5
External Conflict	59062	9.694	1.132	7	12
Alesina et al. (2003)					
Ethnic	62062	0.339	0.212	0.002	0.746
Language	62062	0.295	0.209	0.002	0.836
Religion	62062	0.428	0.248	0.003	0.824
Solt (2009)					
Gini Coefficient	27725	35.124	6.705	23.796	47.134