

Culture Differences and Tax Morale in the United States and in Europe

James Alm and Benno Torgler*

Abstract

In recent years much research has investigated whether values, social norms, and attitudes differ across countries and whether these differences have measurable effects on economic behavior. One area in which such studies are particularly relevant is tax compliance, given both the noted differences across countries in their levels of tax compliance and the marked inability of standard economic models of taxpayer compliance to explain these differences. In the face of these difficulties, many researchers have suggested that the intrinsic motivation for individuals to pay taxes – what is sometimes termed their “tax morale” – differs across countries, and have used experimental methods or information on a selected country (e.g., Switzerland or Germany) to test this hypothesis. However, the findings of this work necessarily give a somewhat piecemeal and disjointed view of the role of tax morale in compliance. In this paper we try to bring together these disparate findings, by using a data set – the World Values Survey (WVS) – that contains information on individuals in a wide range of countries. We first analyze a cross-section of individuals in Spain and the United States using the WVS. In line with previous experimental results, our findings indicate a significantly higher tax morale in the United States than in Spain, controlling in a multivariate analysis for additional variables. We then extend our multivariate analysis to include 14 European countries in the estimations. Our results again indicate that the United States has the highest tax morale across all countries, followed by Austria and Switzerland. We also find a strong negative correlation between the size of shadow economy and the degree of tax morale in those countries.

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* James Alm, Department of Economics, Andrew Young School of Policy Studies, Georgia State University, University Plaza, Atlanta, GA 30303-3083 USA (phone 404 651-0420; fax 404 651-4985; email jalm@gsu.edu). Benno Torgler, Yale Center for International and Area Studies, Leitner Program in International & Comparative Political Economy, 34 Hillhouse Avenue, P.O. Box 208206, New Haven, CT 06520; and CREMA, Center for Research in Economics, Management and the Arts (Switzerland) (email benno.torgler@yale.edu). We are grateful to Doris Aebi, participants of the Annual Meeting of the Public Choice Society 2004 in Baltimore (especially Daniel Arce, Stephen Knack, Christopher Westley, and Mario Ferrero), and participants of the 2004 Annual Conference of the National Tax Association in Minneapolis (especially Jon Davis and Richard Bird) for many helpful comments and discussions. Financial support from the Swiss National Science Foundation, the Max Geldner-Stiftung, the Janggen-Pöhn-Stiftung, the FAG (Freiwillige Akademische Gesellschaft, and the University of Basel (Fonds zur Förderung des Akademischen Nachwuchs) is gratefully acknowledged.

I. INTRODUCTION

In recent years much research has investigated whether values, social norms, and attitudes differ across countries and whether these differences have measurable effects on economic behavior. One area in which such studies are particularly relevant is tax compliance, given both the noted differences across countries in their levels of tax compliance and the marked inability of standard economic models of taxpayer compliance to explain these differences. Tax compliance seems to depend upon numerous factors beyond the standard economic ones of deterrence, and, given the level fines and audit rates in most countries (in combination with available estimates of risk aversion), deterrence models predict far too much compliance and far too little tax evasion (Alm, McClelland, and Schulze, 1992; Frey and Feld, 2002). Long and Swingen (1991, p. 130) argue that some taxpayers are “...simply predisposed NOT to evade“, and thus do not even search for ways to cheat at taxes (Frey and Foppa, 1986). Pyle (1991) criticizes the assumption that individuals are amoral utility maximizers: “Casual observation suggests that not all individuals think quite like that... indeed, it seems that whilst the odds are heavily in favour of evaders getting away with it, the vast majority of taxpayers behave honestly” (p. 173).

In the face of these difficulties, many researchers have suggested that the intrinsic motivation for individuals to pay taxes (Frey, 1997) – what is sometimes termed their “tax morale” – differs across countries; that is, if taxpayer values are influenced by cultural norms, with different societal institutions acting as constraints and varying between different countries, then tax morale may be an important determinant of taxpayer compliance and other forms of behavior. However, isolating the reasons for these differences in tax morale is notoriously difficult.

Several approaches have been used to examine this notion. In a common approach, studies sometimes referred to as “cultural studies” have often relied upon controlled laboratory experiments conducted in different countries because such experiments can be set

up with identical experimental protocols to allow cultural effects to be isolated. For example, Alm, Sanchez, and De Juan (1995) compared identical tax compliance experiments conducted in Spain and the United States, two countries with very different cultures and histories of compliance. They found that subjects in the United States consistently exhibited higher compliance than subjects in identical experiments in Spain, and attributed these differences to a higher “social norm” of compliance in the United States. However, while informative, the use of experimental methods to investigate tax morale is limited by the ability to conduct such experiments in numerous countries. There have also been studies based on information from individual countries (e.g., East versus West Germany, Switzerland). However, by focusing on a small number of countries (often a single country), such studies necessarily give a somewhat piecemeal and disjointed view of the role of tax morale in compliance.

In this paper we try to bring together these disparate findings, by using a data set – the World Values Survey (WVS) – that contains information on individuals in a wide range of countries. Our intention is to demonstrate the important role of culture differences across countries as determinants of an individual’s attitude toward paying taxes. We first analyze a cross-section of individuals in Spain and the United States using the World Values Survey (WVS) data because it seems likely that survey data on Spain and the United States should show a similar picture as the experimental results. In line with the experiments, our findings indicate a significantly higher tax morale for individuals in the United States than for those in Spain, controlling in a multivariate analysis for additional variables and looking at three different years (or waves) of the WVS. We then extend our multivariate analysis to include individuals in 14 European countries in the estimations. Our results again indicate that the individuals in the United States have the highest tax morale across all countries, followed by individuals in Austria and Switzerland. We also find a strong negative correlation between the size of shadow economy and the degree of tax morale in those countries.

In the next section we briefly discuss previous cross-country findings. In section III we introduce the concept and determinants of tax morale. In section IV we present our empirical results, first on Spain versus the United States and then on the full sample of European countries. In section V we provide some concluding remarks.

II. “CULTURAL” STUDIES IN ECONOMICS

In economics, there is often a lack of evidence on the effects of culture. In the specific area of tax compliance, cross-cultural studies are especially new, and most existing work is found in the experimental literature. Laboratory experiments are able to hold relevant tax-reporting factors constant, and so are able to better isolate possible culture differences.

Such “cultural” experiments have been conducted in several countries. As noted earlier, Alm, Sanchez, and De Juan (1995) use experimental methods to explore the role of social norms in Spain and the United States. In addition, Cummings, Martinez-Vazquez, McKee, and Torgler (2004) combine experimental and survey data from the United States, Botswana, and South Africa to investigate whether cross-cultural differences can explain tax compliance behavior across these countries. Their results indicate that the observed differences in tax compliance behavior and tax morale can be explained by differences in the fairness of tax administration, in the perceived equity of the fiscal exchange, and in the overall attitude towards the respective governments across the countries.

There are also experimental results in other economic research areas, especially behavioral economics, that examine differences in behavior across cultures. These studies show a remarkably mixed and diverse mixed picture. Ockenfels (1999) and Ockenfels and Weimann (1999) perform public good and solidarity experiments in East and West Germany, and find that East Germans are less cooperative than West Germans. In another work, Henrich et al. (2001) undertake a large cross-cultural experimental study of behavior using ultimatum, public good, and dictator games, and find a large variation across the different

cultural groups. They argue that preferences and/or expectations are affected by group-specific conditions such as institutions or cultural fairness norms. Botelho, Harrison, Hirsch, and Ruström (2001) reconsider previously conducted experiments on bargaining behavior in different cultures. They find that there are differences across cultures, but that the differences strongly interact with the demographic characteristics of participants. Ashraf, Bohnet, and Piankov (2003) analyze trust in investment games, dictator games, and risky choice tasks in Russia, South Africa, and the United States, and they find that reciprocity seems to drive Americans' trustworthiness, while in Russia and South Africa trustworthiness is related to kindness.

In contrast, the experimental findings of Brandts, Saijo, and Schram (2004) on voluntary contributions to public goods in different countries (e.g., Japan, the Netherlands, Spain, and the United States) do not find any cultural differences. Similarly, Oosterbeek, Sloof, and van de Kuilen (2004) present a meta-analysis of 37 papers from ultimatum game experiments covering 25 different countries. They find no statistically differences across regions in the proposer's behavior, but a difference for the respondent's behavior.

These cultural studies have added significantly to our understanding of culture and behavior. However, the findings of this work necessarily give a somewhat piecemeal and disjointed view of the general impact of culture on behavior, and the more specific impact of culture on tax morale. In general, the disparate findings suggest that a substantial body of evidence is needed to get a general idea of the impact of societal institutions in economics. Also, these studies typically focus on a single country (or a small number of countries). Relatedly, Oosterbeek, Sloof, and van de Kuilen (2004) argue that cross-cultural experiments contain in most cases data from only one city of each country, so that differences in outcomes may simply reflect differences across different locations rather than differences across countries. These studies also sometimes give conflicting results, as demonstrated in the bargaining studies of subjects in Japan and the United States by Roth, Prasnikar, Okuno-

Fujiware, and Zamir (1991) versus those of Buchan, Croson, and Johnson (2004). We believe that surveys such as the WVS help to bring together these disparate findings, because the WVS allows us to work with a representative set of individuals within a country and across a number of countries. We also believe that it is useful to apply different methodologies to the research question. If an alternative method shows the same tendencies, then we can be more confident that the results are robust.

In the next section, we return to the issue of tax morale, and we present a variety of empirical estimates of the determinants of tax morale that indicate clear cross-cultural differences.

III. THE CONCEPT AND DETERMINANTS OF TAX MORALE

The notion of “tax morale” is not a new one, but it has received surprising little attention in the tax compliance literature. Some preliminary tax morale research was conducted during the 1960s by the “Cologne school of tax psychology” (Schmölders, 1960, 1970; Strümpel, 1969), who tried to build a bridge between economics and social psychology by emphasizing that economic phenomena should not only be analyzed from the traditional neoclassical point of view. In particular, they saw tax morale as an important and integral attitude that was related to tax non-compliance. For example, Schmolders (1960) analyzed tax morale among self-employed workers in Europe, and he concluded that self-employed taxpayers had lower levels of tax morale than taxpayers who worked for other people or organizations. Strümpel (1969) also analyzed tax morale among European taxpayers. He conducted an international comparative survey in Europe, in which he compared both the tax systems of the various European countries and the level of tax morale among each country’s taxpayers. He found that tax morale in Germany was comparatively low, whereas in England it was comparatively high. Strümpel (1969) went on to suggest that the major difference between the German and English tax systems at the time was that the German government

made use of coercive tax enforcement techniques, while the English system treated taxpayers with more respect and less control. Strümpel (1969) also argued that the enforcement strategies used by the Germans served to alienate the public, and that this alienation had a negative influence on their tax morale. He suggested that the English system, in contrast, helped to cultivate tax morale (although he did note that such a system might have offered easy opportunities for avoidance and evasion).

Tax morale is closely linked to what some other authors refer to as “taxpayer ethics”, defined by Song and Yarbrough (1978) as “the norms of behaviour governing citizens as taxpayers in their relationship with the government”. It has also been suggested that tax morale is likely to be affected by the nature of the fiscal exchange between taxpayers and government. For example, Feld and Frey (2002) argue that the way in which government treats taxpayers (e.g., is the exchange viewed by taxpayers as fair or unfair?) affects taxpayer morale. They also argue that the demonstration that the government trusts taxpayers will be rewarded by greater taxpayer trust in government, which also improves tax morale. Relatedly, Smith and Stalans (1991) and Smith (1992) present some evidence that reciprocity (e.g., positive rewards for honest behavior) can be an important inducement for compliance.

Several more contemporary tax compliance scholars have mentioned the concept of tax morale, but even so the concept has been largely neglected.¹

In sum, Feld and Frey (2002, 88-89) point out that:

“...most studies treat ‘tax morale’ as a black box without discussing or even considering how it might arise or how it might be maintained. It is usually perceived as being part of the meta-preferences of taxpayers and used as the residuum in the analysis capturing unknown influences to tax evasion. The more interesting question then is which factors shape the emergence and maintenance of tax morale.”

This paper attempts to fill this gap by identifying cultural (and other) factors that affect tax morale. Our working definition is that tax morale can generally be understood as

¹ For some important exceptions, see Vogel (1974), Lewis (1982), and Kirchler (1987, 1998, 1999).

describing the moral principles or values individuals hold about paying their tax. We argue that tax morale is likely to be influenced by such factors as perceptions of fairness, trust in the institutions of government, the nature of the fiscal exchange between taxpayers and government, and a range of individual characteristics. Importantly, we argue that tax morale is likely to differ across countries because of cultural differences across these countries. The next section presents our empirical approach to estimating the determinants of tax morale.

IV. ESTIMATING THE DETERMINANTS OF TAX MORALE

The World Values Survey (WVS) allows us to analyze tax morale as a dependent variable. The survey is a worldwide investigation of socio-cultural and political change that collects comparative data on values and belief systems among peoples around the world. It is based on representative national samples of at least 1000 individuals in a country, and has been conducted in more than 80 countries. All surveys are done via face-to-face interviews at the respondents' homes and in their respective national languages. The sampling design consists of a multi-stage, random selection of sampling points with a number of individual observations drawn from all administrative regional units, after stratification by region and by degree of urbanization. The survey results can be weighted to represent national population parameters.²

Because the WVS asks the identical question to respondents in the various countries, the survey provides us a unique opportunity to examine cross-country (and cross-year) comparisons of societal attitudes toward religion, culture, and, especially for our purposes, tax compliance.

The general question to assess the level of tax morale from the WVS is:

“Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: Cheating on tax if you have

² For a comprehensive discussion of the WVS, see Inglehart et al. (2000).

the chance (% “never justified” – code 1 from a ten-point scale where 1=never and 10=always).”

In our case, the natural cut-off point is at the value 1 because many respondents assert that cheating on tax is “never justified”. The tax morale variable therefore takes the value 1 if the respondent says that cheating on tax is “never justified”, and 0 otherwise.

We believe that the WVS data sets have the distinct advantage that they are designed as wide-ranging surveys, which reduces the probability of participants being suspicious and of creating framing effects from other tax context questions. We also argue that on balance it is better to use an index instead of a single question to measure tax morale.³ In general, the use by the WVS of a single question has the advantage that problems like complexity that are associated with the construction of an index can be reduced, especially regarding the measurement procedure or a low correlation between the items. However, we recognize that in cross-cultural comparisons single item measures should be treated with some caution. For example, in countries where tax revenues are collected to finance a “dictator’s war machine”, tax evasion might be justifiable and there could even be a “moral duty” not to pay taxes; similarly, in authoritarian political systems people will search for “voice” or “exit” mechanisms via tax resistance to express their preferences (Torgler, 2001). Because Europe and United States can be seen as relatively homogeneous countries, we believe that such problems are likely reduced. Furthermore, we work with more than one survey and thus consider different time periods, and this allows us to analyze the robustness over time of tax morale determinants. Even so, there is still the potential problem in the WVS that some individuals may excuse their non-cooperative behavior in the past by declaring relatively high tax morale values.

³ For example, Kirchler (1997, 1999) used 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.

1. Tax Morale in Spain and the United States

Before examining the multiple regressions, we display in *Figure 1* a histogram that refer to the distribution of tax morale scores in the United States and in Spain for the years 1990, 1995, and 1999-2000. *Figure 1* presents the percentage of individuals that argue that tax evasion is never justifiable. We observe for all WVS waves that tax morale is higher in the United States. However, this purely descriptive analysis gives information about the raw effects and not the partial effects. The observed differences between United States and Spain might be explained in terms of differences in socio-demographic and socio-economic factors. Thus, multiple regressions help us to disentangle the effects of socio-demographic and socio-economic factors from a possible culture difference.

We estimate separately the determinants of TAX MORALE at the individual level for the combined United States and Spain data set for three different time periods: 1990, 1995, 1999-2000. The analysis of three time periods helps give us a robust picture of the levels of tax morale in the United States and Spain and the determinants that shape tax morale in the countries. *Figure 1* indicates that the natural cut-off point for TAX MORALE is at the value 1, showing that many respondents believe that cheating on taxes is never justifiable. We therefore utilize probit estimation methods.⁴ We also use a weighting variable on all observations to adjust the data to reflect the national distribution. In order to compensate for the fact that the number of participants between the countries vary, the observations are also weighted to get an equal number of observations for each country.⁵ To obtain the quantitative impacts of the explanatory variables, we calculate the marginal effects of each variable. We

⁴ We have also estimated weighted order probit models, in which the ten-point scale is recoded into a four-point scale (0 to 3), with the value 3 standing for “never justified” and where the value of 0 is an aggregation of the last seven scale points of the original variable. Our results are unaffected.

⁵ This was done by taking the original weighting variable and multiplying it by a constant for each survey. If the data were not weighted, the resulting pooled estimates could be biased. The weighting variable is provided by the WVS.

have also tried to present similar specifications for all three waves to better check the robustness of the results.⁶

We are especially interested in whether there are statistically significant differences between the two countries. For each year, we include a separate dummy variable SPAIN, equal to 1 if the WVS respondent is a resident of Spain and 0 if the respondent is a resident of the United States. As suggested by the experimental results of Alm, Sanchez, and De Juan (1995), our expectation is that residents of Spain will, other things equal, exhibit a lower TAX MORALE than residents of the United States.

Table 2 presents the results for 1990, *Table 3* for 1995, and *Table 4* for 1999-2000. We report a large number of alternative specifications, and all specifications show the marginal effects of the explanatory variables on the highest value of tax evasion (e.g., tax evasion is “never justified”).

The variable of most interest is SPAIN. The estimated coefficient on SPAIN is negative and highly significant across all specifications, and indicates that tax morale is significantly higher in the United States than in Spain. The marginal effects indicate that being from Spain rather than from the United States reduces the probability of stating that tax evasion is never justified between 8.7 and 9.6 percentage points in 1990, between 4.7 and 5.3 percentage points in 1995, and between 4.9 and 6.7 percentage points in 1999-2000.⁷ Thus our findings show that tax morale is unambiguously higher in the United States for all survey waves, with the strongest difference between both countries for the year 1990.

To investigate whether the difference between Spain and the United States is largely driven by higher trust in the United States, we include several trust variables together with the SPAIN dummy variable in the same equations.⁸ It can be argued that positive actions by the

⁶ For the year 1999-2000, we had to use a slightly different estimation because the variables that capture the “economic situation” and “trust” have not been collected fully in both countries.

⁷ Similarly, the estimated coefficient on SPAIN for the 1995 estimates is negative and highly significant, with an impact on tax morale of roughly one-half its impact in 1990.

⁸ In 1999, trust in the legal system was not collected for both countries.

state are intended to increase taxpayers' positive attitudes and commitment to the tax system and that this "reciprocity" can increase compliant behavior (Smith and Stalans, 1991; Smith, 1992): if the state acts in a trustworthy way, then taxpayers might be more willing to comply with the taxes. We use two trust variables, TRUST IN LEGAL SYSTEM⁹ and TRUST IN PARLIAMENT¹⁰, which are available for both countries to check the robustness of the trust variables; TRUST IN LEGAL SYSTEM is available only for 1990 and 1995, and TRUST IN PARLIAMENT is available for all three waves of the WVS. These variables allow us to analyze trust at the constitutional level (e.g., trust in the legal system), thereby focusing on how the relationship between the state and its citizens is established; they also allow us to analyze trust more closely at the current politico-economic level (e.g., trust in the parliament). In all estimations both trust variables have a significantly positive effect on tax morale with marginal effects between 2.3 and 3.1 (TRUST IN LEGAL SYSTEM) and between 1.0 and 4.1 (TRUST IN PARLIAMENT) percentage points.

Also robust across all specifications is the positive correlation between TAX MORALE and religion. Religiosity might influence people's habits, and might make individuals reluctant to engage in tax evasion. As the religious variable, we use the variable frequency of CHURCH ATTENDANCE, which measures how much time individuals devote to religion.¹¹ Empirical studies have tended to show that states and counties with higher rates of religious attendance and memberships have significantly less violent and non-violent crime (Hull and Bold, 1989; Lipford, McCormick, and Tollison, 1993; Hull, 2000). Our result is in line with previous studies.

⁹ The WVS survey question is: "Could you tell me how much confidence you have in the legal system: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all? (4= a great deal to 1=none at all)."

¹⁰ The WVS survey question is: "Could you tell me how much confidence you have in the parliament: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all? (4= a great deal to 1=none at all)."

¹¹ The WVS survey question is: "Apart from weddings, funerals and christenings, about how often do you attend religious services these days? (1990 and 1995: 7= more than once a week to 1=never, practically never; 1999: 8=7= more than once a week to 1=never, practically never)."

We also include additional variables that attempt to proxy for income. The income variable is scaled differently in Spain and in the United States, so that a direct measure of income cannot be included. However, we have included variables in which people had to self-classify themselves in different income groups (e.g., LOWER CLASS, WORKING CLASS, LOWER MIDDLE CLASS, UPPER MIDDLE CLASS, UPPER CLASS).¹² In general, the lowest economic class has the highest tax morale. Because it is not possible to use the economic situation as a variable for the year 1999-2000, we use education (e.g., UPPER EDUCATION, MIDDLE EDUCATION, LOWER EDUCATION) as an alternative variable.¹³ The estimation for 1999-2000 using education instead of the economic class as a variable shows the same tendencies as the other years; that is, individuals with the lowest education have the highest tax morale. Also, women and older individuals tend to exhibit a higher TAX MORALE, but the coefficients on WOMEN and AGE are not statistically significant in all estimations. Marital status might influence legal or illegal behavior depending on the extent to which individuals are constrained by their social networks (Tittle, 1980), and such a constraint might affect tax morale. However, MARITAL STATUS might interact with the tax system because of different tax treatments of married versus single individuals. Evidence from the United States and Spain in all tables indicates that married people have a higher tax morale than singles.

Overall, then, our estimation results in *Tables 2 to 4* for 1990, 1995, and 1999-2000 consistently indicate that TAX MORALE in Spain is significantly lower than in the United States. Certainly, working with survey data has the disadvantage that we cannot control for such traditional factors as the audit probability (because this is not known for each individual) and the fine rate (because this is identical for all individuals in a country). Furthermore, because we do not have detailed information about each individual's income, we cannot

¹² The WVS survey question is: "People sometimes describe themselves as belonging to the working class, the middle class, or the upper or lower class. Would you describe yourself as belonging to the: ...?"

¹³ This variable has only been collected for the year 1999-2000.

include the individual's marginal tax rate as a potential determinant of his or her tax morale, even though tax rates may influence fairness perceptions and thus tax morale (Seidl and Traub, 2001). Even so, our estimation results are very robust across the three years of the WVS, and are also consistent with the experimental results of Alm, Sanchez and De Juan (1995) who do in fact control for such factors in their experiments.

2. United States and Europe

There are few studies that systematically analyze tax morale in different nations. Weck (1983), Weck, Pommerehne, and Frey (1984), and Frey and Weck-Hannemann (1984) developed a "tax immorality" index, and found a higher tax immorality in Romanic countries like France, Italy, and Spain compared to other European countries. Kirchgässner (1999) argues that state and religious authority were largely held by one person in the northern states of Europe (in contrast to the majority of Catholic countries in the south). Offenses against the state were therefore also religious offenses and consequently a sin.

With the WVS wave 1990-1993, we can combine the largest number of Western European countries into an empirical study using multiple regression analysis. As with the Spain-United States estimation, we include country dummy variables using the United States as the reference (and omitted) group. This allows us to determine whether there are differences in TAX MORALE between the United States and European countries. In a further estimation we differentiate between Romanic and Northern Countries, with a dummy variable excluding the United States to check whether previous findings with data from the 1960s and 1970s (e.g., Weck, 1983) can be confirmed.¹⁴ Data from a later World Values Survey in 1995-1997 do not allow such a comparison, as a smaller number of European countries participated in the 1995-1997 WVS. To maximize the number of countries in the estimations,

¹⁴ For this estimation, we define Italy, France, Portugal and Spain as Romanic countries; Austria, Denmark, Finland, Great Britain, Ireland, Netherlands, Norway, Sweden, and Germany are defined as Northern countries. Switzerland and Belgium have been excluded from this estimation because these two countries have both Romanic and Northern regions in their territory.

some previously used control variables in the United States and Spain estimations have been excluded. *Table 5* presents the results.

As indicated in *Table 5*, the United States has the highest tax morale among all countries. Only Switzerland shows a coefficient that is not significant with low marginal effects. Belgium exhibits the strongest differences compared to the United States, with marginal effects of than 30 percentage points lower than the United States. It is interesting to observe that the highest tax morale is observed in the United States and in Switzerland, two countries with a strong direct democratic tradition. Taxpayers are treated as “citizens” with extensive rights and obligations (Frey, 2003). The possibility for taxpayers to vote on fiscal issues might influence tax morale, and being involved in the political decision process might enhance taxpayers’ sense of civic duty (Feld and Frey, 2002) and thus their tax morale. The instrument of direct democracy helps spend taxes according to their preferences, and the motivation to contribute paying their taxes may increase.

Our results are similar to some previous findings. For example, Pommerehne and Weck-Hannemann (1996) use cross-section/time series regressions with Swiss data, and they find that tax evasion is lower in cantons with a higher degree of direct political control. Torgler (2003b) also finds with Swiss survey data that a higher direct democracy leads to a higher tax morale. Feld and Frey (2002) analyze how tax authorities treat taxpayers in Switzerland, and find that tax authorities of cantons with more direct participation rights, compared to cantons with less direct democracy, treat taxpayers more respectfully, are less suspicious if taxpayers report too low incomes, and more heavily fine unsubmitted tax declarations. Alm, McClelland, and Schulze (1999) and Feld and Tyran (2002) use experimental methods, and show that voting on tax issues has a positive effect on tax compliance.

The estimation in specification (13) in *Table 5* is also consistent with previous findings. People from Northern Europe have a higher tax morale than people from Southern

Europe. The marginal effects indicate that being from a Romanic country rather than from Northern Europe reduces the probability of stating that tax evasion is never justified by 1.3 percentage points.

As for other variables, we observe results in line with the findings obtained in *Tables 2 to 4*. Age has a positive effect on tax morale, women have a higher tax morale than men, and married people have a higher than singles. The coefficient CHURCH ATTENDANCE is also statistically significant with a positive sign. Interestingly, compared to full-time employees, the share of self-employers reporting the highest tax morale is 6.5 percentage points lower. The results correspond to the standard argument that self-employed taxpayers exhibit lower tax compliance, based on higher compliance and opportunity costs of being honest, a result that supports the findings of Schmolders (1960) more than 40 years ago.

V. CONCLUSIONS

A significant body of research on tax compliance has been accumulated. Much work has concentrated on traditional topics, such as the impact of audit, penalty, and tax rates on compliance. However, there is overwhelming evidence that observed tax compliance behavior cannot be explained entirely with the traditional economic analysis that focuses mainly on deterrence components. Instead, there are several other factors that help explain why many people are compliant, especially the notion of “tax morale”. However, previous experimental and empirical attempts to examine the role of these other factors have often focused on a single country or a small number of countries, and have also examined only a few factors that might explain compliance. We attempt to bring together the numerous – but contrasting and jumbled – insights from this earlier work by examining the many social and institutional factors in tax morale across a wide range of countries. In particular, we use a data set from the World Values Survey that contains information on individuals in multiple countries. We conduct a cross-country comparison of tax morale with these data. Tax

morale, or “the intrinsic motivation to pay taxes” might help explain the puzzle of why so many individuals pay their taxes. Interestingly, this factor until now has mostly been discussed as a residual explanation without investigating factors that shape tax morale. By analyzing tax morale as a dependent variable, we hope to fill a large, and largely unexplored, gap in the tax compliance literature.

Using WVS data on Spain versus the United States from three different waves, we first find strong evidence consistent with previous experimental results of Alm, Sanchez and De Juan (1995), who demonstrated that subjects in laboratory economic experiments in the United States consistently exhibited higher compliance than subjects in identical experiments in Spain. In our estimation results, individuals in the United States have a statistically significant higher tax morale than those in Spain, controlling in a multivariate analysis for additional factors. The marginal effects were quite high. We believe that these estimation results are consistent with a higher “social norm” of compliance in the United States than in Spain.

We then extend our multivariate analysis to include further 14 European countries in the estimations. Our results show that individuals in the United States have the highest tax morale across all countries in our sample, followed by those in Austria and Switzerland. The high tax morale values in the United States and in Switzerland might indicate that strengthening direct democratic elements helps increase tax morale, a result that has been found experimentally (Alm, McClelland, and Schulze, 1999; Feld and Tyran, 2002). Such institutional and political methods may enhance individuals’ identification and loyalty with the state, based on actively participating in the political process and expressing their preferences. Our results also indicate a higher tax morale in Northern European countries than in Romanic countries.

A relevant issue is whether these clear differences in tax morale across countries are reflected in any differences in real, or observed, behaviors in these countries. One area in

which tax morale might be expected to have such real effects is in the size of the informal or shadow economy. The number of countries (16) used in *Table 5* allows us to exploit TAX MORALE at the aggregated level, by using the average within each country of the percentage of people stating that tax evasion is never justifiable to analyze the simple correlation between tax morale and the size of shadow economy. The size of the shadow economy is measured as a percent of official GDP, using the estimates of the shadow economy from Schneider and Klinglmaier (2004).¹⁵ *Figure 3* shows that there is a strong negative correlation (Pearson $r = -0.460$) significant at the 0.05 level. Analyzing the linear relationship in a simple regression indicates that the variable tax morale can explain more than 20 percent of the total variance of the variable size of shadow economy. Thus, the degree of tax morale has consequences for real behavior, and might be responsible for the size of shadow economy.¹⁶

In summary, our results indicate that tax morale differs significantly and systematically across countries. Our results also indicate that such differences seem likely to have real effects, and in particular may help explain the size of shadow economy in the countries analyzed in this paper. Further investigation of the determinants – and the resulting effects – of tax morale is called for.

¹⁵ See also Schneider and Enste (2002) for a detailed description of the DYMIMIC (dynamic multiple-indicators and multiple-causes) and the currency demand approaches that are used.

¹⁶ We also examined simple correlation coefficients between tax morale and a number of additional variables, such as total tax revenues as a percent of GDP, per capita total tax revenues, and the shares of the major taxes in total tax revenues or in GDP. Although these correlations were generally of the expected signs (e.g., tax morale was negatively correlated with total tax revenues as a percent of GDP), they were seldom statistically significant.

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Figure 1. Tax Morale in Spain and the United States

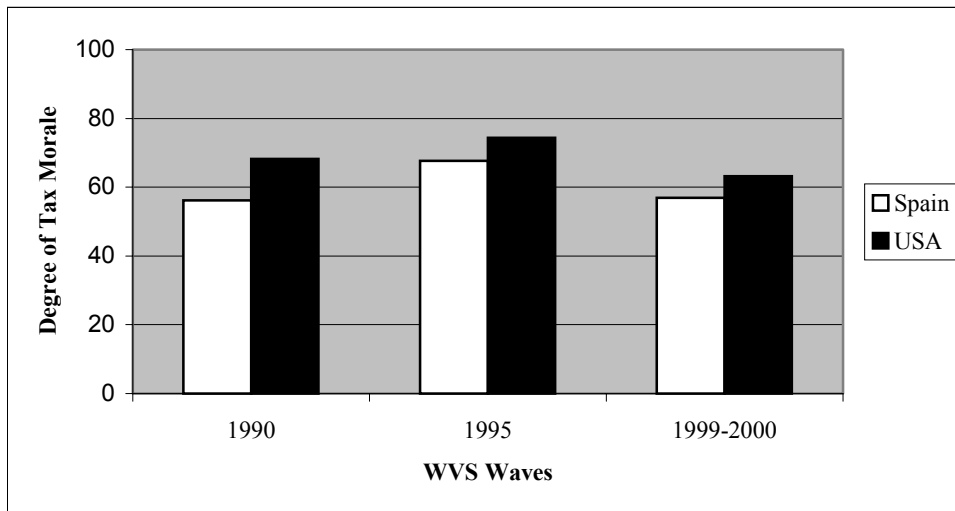


Figure 2. Tax Morale in the United States and Europe

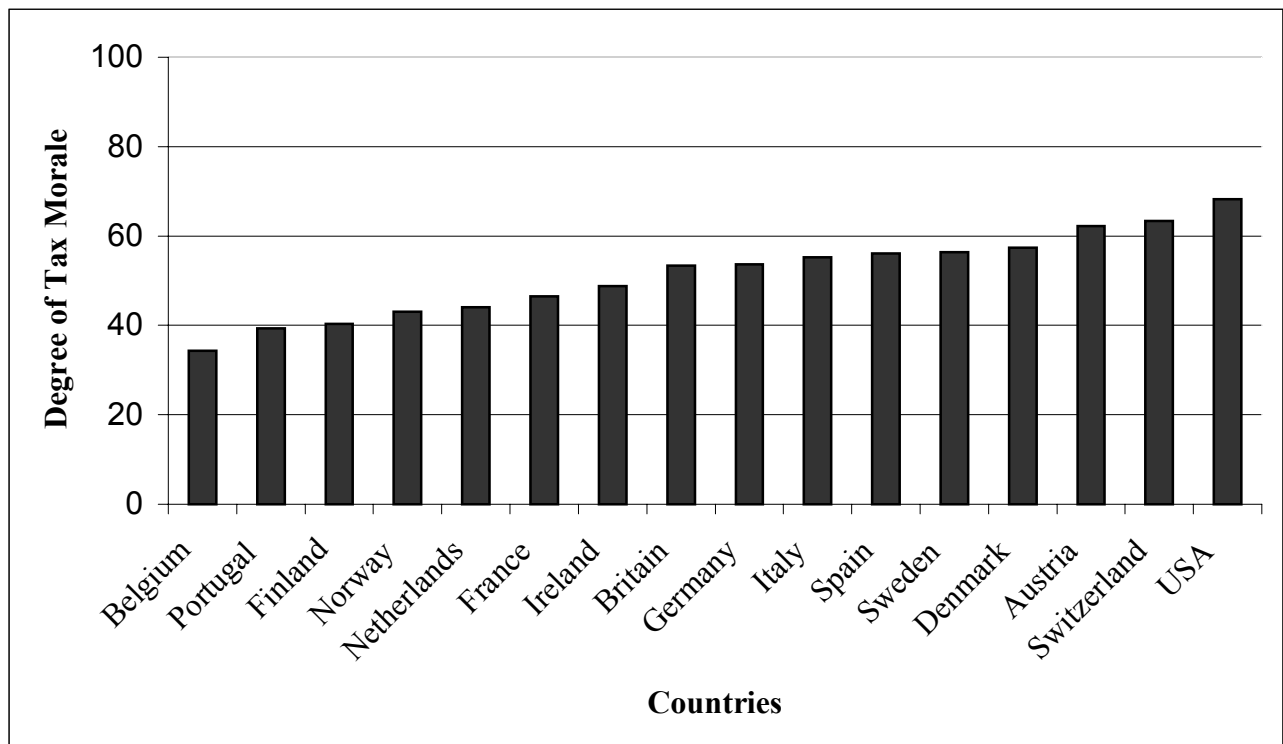
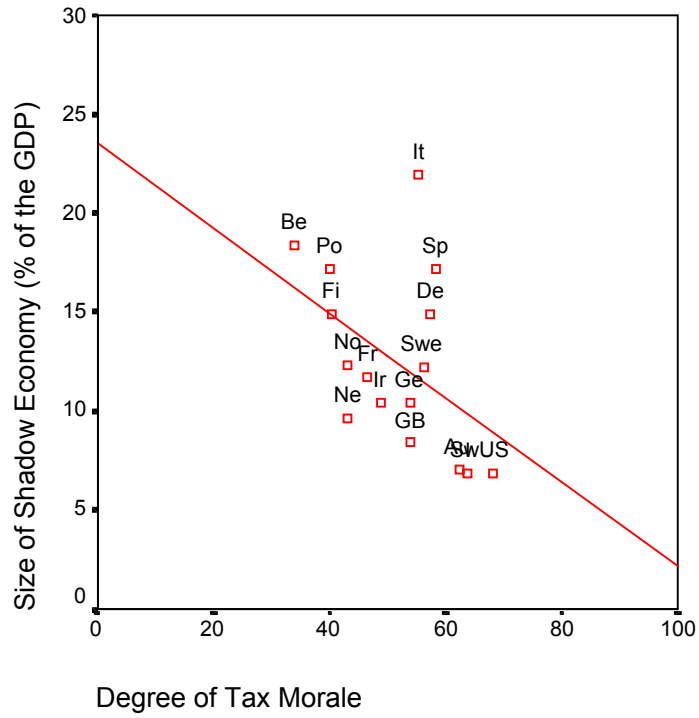


Figure 3. Tax Morale and the Size of Shadow Economy



Notes: Au: Austria, Be: Belgium, De: Denmark, Fi: Finland, Fr: France, Ge: Germany, GB: Great Britain, Ir: Ireland, It: Italy, Ne: Netherlands, No: Norway, Po: Portugal, Sp: Spain, Sw: Switzerland, Swe: Sweden, US: USA.

Table 1. Descriptive Statistics

	Mean	Standard Deviation	Minimum	Maximum	Cases
<i>Spain and the United States 1990</i>					
TAX MORALE	0.587	---	0	1	5986
TRUST IN THE LEGAL SYSTEM	2.479	0.830	1	4	5928
TRUST IN THE PARLIAMENT	2.289	0.818	1	4	5784
AGE	43.620	17.501	18	91	5949
FEMALE	0.524	---	0	1	5946
MARRIED	0.618	---	0	1	5984
FULL-TIME EMPLOYED	0.390	---	0	1	5920
LOWER MIDDLE CLASS	0.396	---	0	1	5593
CHURCH ATTENDANCE	3.864	2.181	1	7	5959
<i>Spain and the United States 1995</i>					
TAX MORALE	0.708	---	0	1	2753
TRUST IN THE LEGAL SYSTEM	2.355	0.787	1	4	2657
TRUST IN THE PARLIAMENT	2.200	0.748	1	4	2609
AGE	46.459	18.641	0	91	2753
FEMALE	0.509	---	0	1	2753
MARRIED	0.618	---	0	1	2749
FULL-TIME EMPLOYED	0.369	---	0	1	2715
WORKING CLASS	0.426	---	0	1	2640
CHURCH ATTENDANCE					
<i>Spain and the United States 1999-2000</i>					
TAX MORALE	0.590	---	0	1	3550
TRUST IN THE PARLIAMENT	2.401	0.800	1	4	3436
AGE	44.669	17.599	18	97	3609
FEMALE	0.534	---	0	1	3609
MARRIED	0.550	---	0	1	3605
FULL-TIME EMPLOYED	0.386	---	0	1	3604
LOWER EDUCATION	0.380	---	0	1	3603
CHURCH ATTENDANCE	4.380	2.630	1	8	3586
<i>Europe and the United States</i>					
TAX MORALE	0.518	---	0	1	26968
AGE	43.805	17.203	18	91	27274
FEMALE	0.525	---	0	1	27328
MARRIED	0.600	---	0	1	27350
FULL-TIME EMPLOYED	0.451	---	0	1	27055
CHURCH ATTENDANCE	3.454	2.090	1	7	27122

Note: For socio-economic and socio-demographic variables the dummy with the highest mean values among all categories has been reported.

Table 2. Determinants of Tax Morale in Spain and the United States (1990)

Weighted Probit	(1)			(2)			(3)			(4)		
	Coefficient	t-ratio	Marginal Effect	Coefficient	t-ratio	Marginal Effect	Coefficient	t-ratio	Marginal Effect	Coefficient	t-ratio	Marginal Effect
Independent Variables												
Culture Variable												
SPAIN	-0.253***	-6.80	-0.096	-0.241***	-6.42	-0.092	-0.216***	-5.68	-0.082	-0.237***	-5.98	-0.090
Demographic Factors												
AGE	0.010***	6.89	0.004	0.010***	6.76	0.004	0.010***	6.69	0.004	0.010**	6.510	0.004
WOMAN	-0.007	-0.18	-0.003	-0.005	-0.14	-0.002	0.002	0.05	0.001	0.011	0.271	0.004
Marital Status												
MARRIED	0.178***	3.48	0.068	0.175***	3.40	0.066	0.157***	3.02	0.060	0.167***	3.14	0.064
LIVING TOGETHER	0.019	0.16	0.007	0.019	0.16	0.007	0.025	0.21	0.009	0.043	0.36	0.016
DIVORCED	-0.107	-1.10	-0.041	-0.110	-1.12	-0.042	-0.109	-1.09	-0.042	-0.116	-1.15	-0.044
SEPARATED	-0.150	-1.19	-0.057	-0.158	-1.25	-0.060	-0.172	-1.35	-0.066	-0.147	-1.14	-0.056
WIDOWED	0.178	1.60	0.053	0.141	1.60	0.054	0.133	1.50	0.051	0.110	1.21	0.042
Employment Status												
PARTTIME EMPLOYED	0.004	0.05	0.001	-0.003	-0.050	-0.001	-0.025	-0.35	-0.009	0.017	0.24	0.007
SELFEMPLOYED	-0.138*	-1.72	-0.052	-0.139*	-1.73	-0.053	-0.116	-1.44	-0.044	-0.135	-1.61	-0.051
UNEMPLOYED	0.028	0.37	0.011	0.015	0.19	0.006	0.013	0.17	0.005	0.002	0.02	0.001
AT HOME	0.107*	1.79	0.041	0.086	1.43	0.033	0.094	1.55	0.036	0.057	0.91	0.022
STUDENT	0.066	0.77	0.025	0.067	0.78	0.026	0.028	0.32	0.011	0.082	0.91	0.031
RETIRED	0.022	0.34	0.008	0.020	0.31	0.008	0.018	0.27	0.007	0.005	0.07	0.002
OTHER	-0.197	-0.86	-0.075	-0.255	-1.10	-0.097	-0.255	-1.08	-0.097	-0.620**	-2.12	-0.236
Economic Situation												
UPPER CLASS												
UPPER MIDDLE CLASS												
LOWER MIDDLE CLASS												
Religiosity												
CHURCH ATTENDANCE	0.040***	4.81	0.015	0.039***	4.65	0.015	0.039***	4.57	0.015	0.047***	5.38	0.018
Trust												

TRUST IN LEGAL SYSTEM			0.072***	3.43	0.028	0.107***	4.98	0.041	0.060***	2.72	0.023
TRUST IN PARLIAMENT											
Number of observations	5824		5767			5632			5392		
Prob (LM-statistic)	0.000		0.000			0.000			0.000		

Notes: The dependent variable is TAX MORALE. In the reference group for all dummy variables are MAN, SINGLE, FULL TIME EMPLOYED, WORKING CLASS, and USA. The marginal effect is calculated at the highest TAX MORALE score. Significance levels are: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

CHURCH ATTENDANCE	0.035***	2.75	0.012	0.029**	2.16	0.010	0.033**	2.52	0.012	0.032**	2.32	0.011
Trust												
TRUST IN LEGAL SYSTEM				0.091***	2.65	0.031				0.082**	2.37	0.028
TRUST IN PARLIAMENT							0.029	0.81	0.010			
Number of observations	2674			2587			2539			2498		
Prob(LM-statistic)	0.000			0.000			0.000			0.000		

Notes: The dependent variable is TAX MORALE. In the reference group for all dummy variables are MAN, SINGLE, FULL TIME EMPLOYED, WORKING CLASS and LOWER CLASS, and USA. The marginal effect is calculated at the highest TAX MORALE score. Significance levels are: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

Table 4. Determinants of Tax Morale in Spain and the United States (1999-2000)

Weighted Probit	(9)		(10)		(11)				
	Coefficient	t-ratio	Marginal Effect	Coefficient	t-ratio	Marginal Effect			
Independent Variables									
Culture Variable									
SPAIN	-0.126**	-2.38	-0.049	-0.146***	-2.71	-0.057	-0.173***	-2.99	-0.067
Demographic Factors									
AGE	0.007***	3.09	0.003	0.006***	2.85	0.002	0.006**	2.52	0.002
WOMAN	0.207***	3.83	0.080	0.190***	3.45	0.073	0.195***	3.52	0.075
Marital Status									
MARRIED	0.168**	2.48	0.065	0.173**	2.49	0.067	0.167**	2.39	0.065
LIVING TOGETHER	-0.064	-0.50	-0.025	-0.066	-0.51	-0.026	-0.060	-0.46	-0.023
DIVORCED	0.100	0.82	0.038	0.111	0.89	0.042	0.124	1.00	0.047
SEPARATED	0.014	0.08	0.005	0.021	0.13	0.008	0.022	0.13	0.009
WIDOWED	-0.053	-0.42	-0.021	-0.090	-0.69	-0.035	-0.104	-0.80	-0.041
Employment Status									
PARTTIME EMPLOYED	0.164*	1.82	0.062	0.191**	2.10	0.072	0.199**	2.19	0.075
SELFEMPLOYED	-0.124	-1.20	-0.049	-0.116	-1.10	-0.045	-0.110	-1.05	-0.043
UNEMPLOYED	0.139	1.55	0.053	0.132	1.45	0.050	0.123	1.35	0.047
RETIRED	0.148	1.63	0.056	0.177*	1.91	0.067	0.172*	1.85	0.065
AT HOME	0.069	0.85	0.026	0.083	0.99	0.032	0.060	0.72	0.023
STUDENT	-0.011	-0.10	-0.004	0.000	0.00	0.000	0.019	0.16	0.007
OTHER	0.478**	2.57	0.168	0.517***	2.72	0.181	0.489**	2.59	0.172
Education									
UPPER EDUCATION							-0.108	-1.57	-0.042
MIDDLE EDUCATION							-0.131**	-2.12	-0.051
Religiosity									
CHURCH ATTENDANCE	0.043***	4.33	0.016	0.041	4.03***	0.016	0.041***	4.08	0.016
Trust									
TRUST IN PARLIAMENT				0.074	2.42**	0.029	0.076**	2.46	0.029

Number of observations	3521	3363	3357
Prob(LM-statistic)	0.000	0.000	0.000

Notes: The dependent variable is TAX MORALE. In the reference group for all dummy variables are MAN, SINGLE, FULL TIME EMPLOYED, LOWER EDUCATION, and USA. The marginal effect is calculated at the highest TAX MORALE score. Significance levels are: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

Table 5. Tax Morale in Europe and in the United States

Weighted Probit	Marginal			Marginal		
	Coefficient	t-ratio	Effect	Coefficient	t-ratio	Effect
Independent Variables	(12)			(13)		
Countries						
AUSTRIA	-0.164***	-3.40	-0.065			
BELGIUM	-0.829***	-16.98	-0.330			
DENMARK	-0.121**	-2.49	-0.048			
FINLAND	-0.605***	-12.34	-0.241			
FRANCE	-0.443***	-9.14	-0.177			
GERMANY	-0.313***	-7.42	-0.125			
GREAT BRITAIN	-0.295***	-6.12	-0.118			
IRELAND	-0.539***	-11.17	-0.215			
ITALY	-0.268***	-5.60	-0.107			
NETHERLANDS	-0.576***	-11.87	-0.230			
NORWAY	-0.544***	-11.17	-0.217			
PORTUGAL	-0.642***	-13.40	-0.256			
SPAIN	-0.195***	-4.03	-0.078			
SWEDEN	-0.136***	-2.71	-0.054			
SWITZERLAND	-0.005	-0.09	-0.002			
Demographic Factors						
AGE	0.011***	14.59	0.004	0.012***	13.92	0.005
FEMALE	0.235***	12.84	0.094	0.249***	12.36	0.099
Marital Status						
MARRIED	0.079***	3.22	0.032	0.059**	2.20	0.024
LIVING TOGETHER	-0.158***	-4.21	-0.063	-0.163***	-3.96	-0.065
DIVORCED	0.057	1.24	0.023	0.073	1.42	0.029
SEPARATED	-0.059	-0.78	-0.024	-0.072	-0.81	-0.029
WIDOWED	0.092	2.15	0.037	0.101**	2.09	0.040
Employment Status						
PART TIME EMPLOYED	-0.051	-1.49	-0.020	-0.070*	-1.85	-0.028
SELFEMPLOYED	-0.163***	-4.21	-0.065	-0.114***	-2.68	-0.045
UNEMPLOYED	-0.007	-0.18	-0.003	0.043	0.94	0.017
AT HOME	-0.021	-0.71	-0.008	-0.041	-1.29	-0.016
STUDENT	-0.070*	-1.69	-0.028	-0.093**	-2.05	-0.037
RETIRED	0.096***	3.04	0.038	0.099***	2.80	0.039
OTHER	0.029	0.50	0.011	0.017	0.28	0.007
Religious Variable						
CHURCH ATTENDANCE	0.042***	9.49	0.017	0.035***	7.56	0.014
Culture						
ROMANIC				-0.034*	-1.66	-0.013
Observations	25695			20366		
Prob(LM-statistic)	0.000			0.000		

Notes: The dependent variable is TAX MORALE. In the reference group for all dummy variables are MAN, SINGLE, FULL TIME EMPLOYED, USA, and NORTHERN COUNTRIES. The marginal effect is calculated at the highest TAX MORALE score. Significance levels are: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.