

Malézieux, Antoine; Torgler, Benno

**Working Paper**

## Culture, immigration and tax compliance

CREMA Working Paper, No. 2021-23

**Provided in Cooperation with:**

CREMA - Center for Research in Economics, Management and the Arts, Zürich

*Suggested Citation:* Malézieux, Antoine; Torgler, Benno (2021) : Culture, immigration and tax compliance, CREMA Working Paper, No. 2021-23, Center for Research in Economics, Management and the Arts (CREMA), Zürich

This Version is available at:

<https://hdl.handle.net/10419/246006>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



Center for Research in Economics, Management and the Arts

# Culture, Immigration and Tax Compliance

Working Paper No. 2021-23

# Culture, Immigration and Tax Compliance <sup>\*</sup>

Antoine Malézieux<sup>†</sup>    Benno Torgler<sup>‡</sup>

June 12, 2021

## Abstract

Although understanding how multiculturalism shapes society is imperative in today's globalized world, insights on certain behavior domains remain limited, including those on tax compliance among domestic versus foreign taxpayers. Our meta-study of laboratory tax experiments analyzes over 50,000 tax declaration decisions by almost 5,000 subjects entailing 95 nationalities. Not only do immigrant participants exhibit significantly less tax compliance than natives even with controls for numerous covariates, but tax compliance correlates positively with tax morale, which in turn also interacts significantly with immigration status. Few variables—mainly linked to politics—influenced the gap of compliance between natives and immigrants.

**Keywords:** Tax evasion; Immigration; Meta-analysis

**JEL classification:** C9; H0; H3

---

<sup>\*</sup>We thank Ben Chan, John D'Attoma, Duccio Gamannossi Degl'innocenti, Xavier Gassmann, Nikos Georgantzis, Alice Guerra, Roberto Hernan Gonzalez, Diana Onu, Marie Rabaté, Rustam Romaniuc, the participants to the LESSAC and TARC seminars and all the researchers who contributed to this meta-analysis. The dataset generated in this meta-analysis is not publicly available as data are property from their respective authors. The dataset can be obtained on request, after express authorization from the authors who did not make their data available online. The authors declare no competing interests.

<sup>†</sup>CEREN, EA 7477, Burgundy School of Business, Université Bourgogne Franche-Comté, 29 Rue Sambin, 21000 Dijon, France (email antoine.malezieux@bsb-education.com).

<sup>‡</sup>Centre for Behavioural Economics, Society and Technology (BEST), Queensland University of Technology, Brisbane, Queensland, Australia. Center for Research in Economics, Management, and the Arts, Switzerland (CREMA). (email benno.torgler@qut.edu.au).

# 1 Introduction

Increased global contacts and interactions in our contemporary world—together with extensive migrations—have raised several important questions about the opportunities and challenges of multiculturalism and the concept of integration (Sen, 2006). One such query, as yet under-researched because of the scarcity of real-life data and its propensity to strong selection bias, is how living in the country of post-immigration residence may influence tax compliance relative to native resident behavior. As Weidenfeld and Spire (2015) notes, in the French system, although foreigners account for only 6% of France’s total population, they comprise 23% of those accused of tax evasion. It remains unclear, however, whether immigrants are more inclined to cheat, have failed to master the host country’s laws or language, or are simply easier prey than natives who better understand the system.

One very important, and socially controversial, aspect that has received little empirical attention is immigration’s impact on crime activity. Although some US research suggests that immigrant flows have no impact on crime rates in metropolitan areas (Butcher and Piehl, 1998a), and that immigrants have much lower incarceration rates than natives (Butcher and Piehl, 1998a,b), a substitution effect may be at play in which recent immigrants raise the frequency of criminal activities by other subpopulations (Borjas et al., 2010). Likewise, whereas recent evidence from Italy demonstrates a positive correlation (albeit no causal relation) between crime (especially an increased incidence of robbery) and immigrant population size, it shows no substantial impact on the overall crime rate (Bianchi et al., 2012).

Evidence is also scarce on immigration’s impact on tax evasion, although significant native-immigrant tax filing differences are documented for Sweden: not only do immigrants claim fewer deductions and bunch less, they are more likely to miss declaration deadlines and be fined for noncompliance (Bastani et al., 2020). Even though some scholars may interpret this latter as a greater proneness to tax evasion, as long as tax authorities’ criteria for audit selection are unknown, the effect of immigrant status on apparent tax noncompliance is also unclear.

One of several approaches to investigating this issue uses data from the World Values Survey (WVS), several waves of which include an item on tax evasion tolerance (i.e., justifiability of tax cheating, see Torgler, 2007). Such measures, however, are merely declarative or intentional, which prevents determination of causality, and, given the subject matter, strongly prone to desirability bias. An alternative method directly measures participants’ incentivized behaviors via laboratory experiments, which, being a highly decontextualized environment, enables the isolation of causality for a policy intervention, personality traits, or characteristics.

For experimental data to be valid and pertinent for our aims, they must encompass (i) numerous different countries and (ii) a large number of participants, both of which criteria are met by our meta-analysis of tax evasion games across multiple nations. These experiments model real-life tax-paying behavior by allowing participants to earn income and then asking them to declare the amount of their taxable income under a preannounced tax rate (Malézieux, 2018). Hence,

to address our research question we compile an extensive sample of over 59,286 experimental tax declarations from 13 countries representing 95 nationalities. Given recent experimental evidence of no link between attitudes toward tax paying and actual tax compliance (Guerra and Harrington, 2018; Bergolo et al., 2020), we also test whether declarative measures of such attitudes are valid, at least under laboratory conditions using cross-country data.

In general, our experimental analysis demonstrates that, independent of mastery of the host country language, immigrants are less tax compliant than natives, an effect that persists even when the covariates of age, gender, experimental income, monthly income, and occupation are kept constant. On the other hand, the higher the participants' tax morale, the higher the tax compliance. In addition, tax morale and immigrant status interact, with immigrants in low (high) tax morale countries being less (more) compliant than natives. Moreover, the declaration gap between an immigrant and the average tax compliance in the host country is influenced by the political closeness of the residence and origin nations (e.g., political stability, votes at the United Nations General Assembly, membership in the World Trade Organization). These findings have important implications for both experimental and public economics: First, they highlight the need to systemically control for participant nationalities, especially when trying to replicate results. Second, they indicate that survey measures such as the WVS tax morale item are valid, representing real behavioral consequences. Lastly, they imply that strategic audits targeting different subpopulations might be a challenge in leveraging tax compliance.

## 2 Data and methodology

Although the meta-analytic method of integrating findings from numerous studies originated in clinical research, it has received increasing attention from the social sciences and experimental economics. In our meta-analysis, we follow Alm and Malézieux (2020) by adopting the four common steps outlined below (Stewart et al., 2015): First, using the list of tax related experiments compiled by Torgler (2016), we extrapolated only those that implement situations mirroring real-life tax declarations (i.e., a tax evasion game wherein participants declare income knowing it will be taxed at a preannounced tax rate). Second, we supplemented this inventory with numerous citations from reviews, bibliographies, and researcher resumes. After amassing a broad compilation of articles, we refined the list based on the eligibility criterion of tax evasion games only, thereby excluding any other game types (e.g., public good games) that implement no explicit forms of cheating. Third, using email, we contacted all corresponding authors about dataset availability and the possibility of sharing (between December 2017 and February 2019). Lastly, after data access had been granted, we compiled our final sample using only those datasets that specify participant nationalities.

The analysis employs five major variables, defined briefly below, as well as a tax morale measure that tests for possible correlation between tax compliance and the perceived acceptability of tax

evasion:

**Compliance:** The compliance rate, the common variable of interest for all included studies, is the ratio of gross income to declared income and ranges from 0% to 100% of gross income.

**Country:** The country variable stipulates in which of the 13 countries (with 245-25,086 observations each; see Appendix Table 11) the game(s) took place.

**Participant nationality:** This variable indicates which of 95 represented nationalities the participant represents ( $N = 59,286$ , see Appendix Table 11).

**Immigrant status:** Building on the two previous variables, we code as 1 observations from participants who were immigrants in the country in which the experiment was conducted ( $N = 47,296$ ), and 0, those who were natives ( $N = 11,990$ ).

**Immigrant-(non)speaker:** Focusing on the immigrant population, we code as 1 observations from immigrants who had mastered the host country language ( $N = 7,647$ ), and 0, those who apparently had not ( $N = 4,343$ ). We also assign the label *immigrant-speaker* to those whose host country language is an official language in the birth country (e.g., English is an official language in Kenya, so Kenyans are immigrant-speakers in the US or UK).

**Tax Morale (WVS):** The tax morale indicator, which enables assessment of culture’s impact on tax evasion game cheating, is based on an item in WVS waves 4/5/6 that asks a representative citizen sample to evaluate whether tax cheating is justifiable. Measured on a 10-point scale from always to never with coding values ranging from 1.06 to 5.67, the lower the indicator, the higher the tax morale.<sup>1</sup>

### 3 Results

In the upper part of Table 1, we report the mean, standard deviation, median, and number of observations for each sociodemographic variable (age, number of males, earnings in Euros, real monthly income in Euros), together with the average value of tax morale compliance rate (declared income divided by earned or given income) and full compliance rate (number of full compliers) for native and immigrant subsamples. In the middle part of the table, we report the same statistics for a subsample of the immigrant population, divided between immigrant-speakers and immigrant-nonspeakers. The last column in both parts compares any significant differences between the two subsamples, revealing numerous significant differences across medians that are addressed in a subsequent analysis. Lastly, the bottom part of the table reports the mean, standard deviation, median, minimum, maximum, first quartile, third quartile, number of countries, and number of observations for the tax morale measure as drawn from the WVS.

---

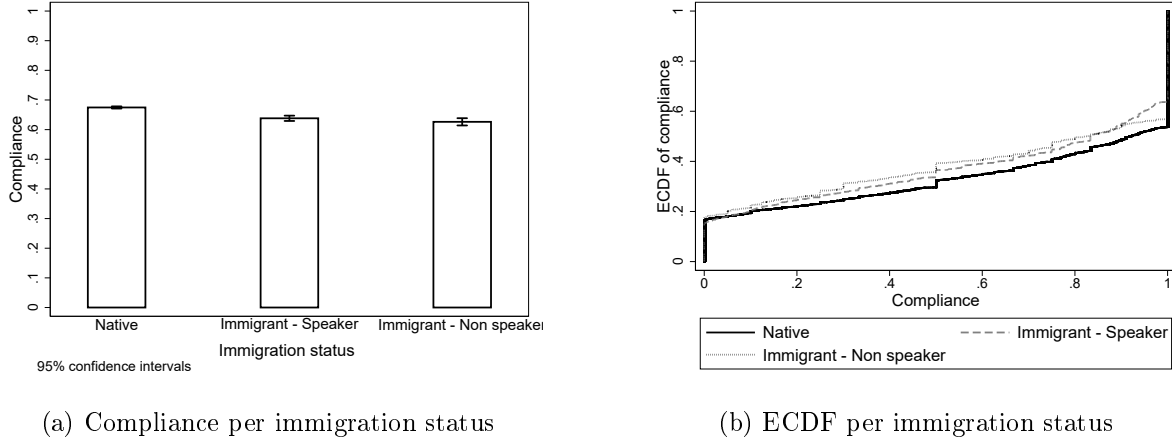
<sup>1</sup>Data are publicly available on the WVS website: <http://www.worldvaluessurvey.org/wvs.jsp>.

Table 1: Sociodemographics, compliance measures across samples, and tax morale for the full sample: Summary statistics

Variable	Native				Immigrant				
	Mean	S.D.	Median	# Obs.	Mean	S.D.	Median	# Obs.	Test
Age	23.78	6.86	22	47,268	24.13	5.72	23	11,990	† † †
Men	0.42	0.49	–	47,278	0.39	0.48	–	11,972	† † †
Earnings (€)	3.22	6.10	1.02	28,146	3.94	5.65	0.95	6,786	† † †
Monthly income (€)	695.79	597.06	515	17,698	642.88	552.43	515	5,156	† † †
Student	0.95	0.21	–	44,030	0.96	0.17	–	11,783	† † †
Tax morale	2.15	0.26	2.15	24,630	2.20	0.34	2.20	10,857	† † †
Compliance	0.67	0.39	0.92	46,524	0.63	0.40	0.83	11,990	† † †
Full compliance	0.46	0.49	–	46,524	0.38	0.48	–	11,990	† † †
Immigrant sub-sample									
Variable	Speaker				Nonspeaker				
	Mean	S.D.	Median	# Obs.	Mean	S.D.	Median	# Obs.	Test
Age	23.89	4.96	23	7,647	24.55	6.82	22	4,343	† † †
Men	0.36	0.48	–	7,638	0.42	0.49	–	4,334	† † †
Earnings (€)	8.27	7.09	13	2,443	1.51	2.29	0.95	4,343	† † †
Monthly income (€)	643.62	553.69	515	5,123	528.19	279.23	428	33	† † †
Student	0.99	0.06	–	7,572	0.91	0.27	–	4,211	† † †
Tax morale	2.22	0.25	2.20	7,596	2.18	0.48	2.21	3,261	† † †
Compliance	0.63	0.39	0.83	7,647	0.62	0.41	0.82	4,343	ns
Full compliance	0.36	0.48	–	7,647	0.43	0.49	–	4,343	† † †
Tax morale									
Variable	Mean	S.D.	Median	Min	Max	Q1	Q3	# Countries	# Obs.
Tax morale	2.16	0.29	2.20	1.06	5.67	1.91	2.21	47	35,487

**Notes.** Tax morale statistics are based on the WVS, waves 4/5/6. Earnings and monthly income are updated for Euros from 2019. Q1 and Q3 stand for the first and third quartile. The last column includes the results of Wilcoxon rank-sum tests to measure median differences for continuous variables and a two-sample test of proportions using groups for binary variables. Significance levels: 5% 1% 0.1%

Figure 1: Compliance across immigration status



**Notes.** (a): Average compliance rate by immigration status (native, immigrant-speakers, immigrants-nonspeakers) with 95% confidence intervals. (b): Empirical cumulative distribution function by immigration status.

### 3.1 The impact of tax morale on tax compliance behavior

To assess the impact of tax morale on tax compliance, we conduct an OLS regression that explores the correlation between these two variables (see Table 2, specification (3)), with lower indicators signalling higher tax morale and higher compliance.<sup>2</sup> The results bear out our expectation of a negative correlation: those from an origin country where acceptance of tax cheating is one point higher fail to report about 9% more income). This highly significant relation ( $t$ -test,  $p < 0.0001$ ) is consistent with the finding of other studies on the tax morale-compliance relation (Schneider and Klinglmair, 2004; Torgler, 2005; Alm and Torgler, 2006; Alm et al., 2006; Torgler and Schneider, 2009; Torgler et al., 2010).

### 3.2 The impact of being an immigrant on tax compliance behavior

The high statistical significance of greater native compliance relative to immigrants (67% vs. 63%), indicated in Table 1 by a Wilcoxon rank-sum test ( $p < .0001$ ), is confirmed in Table 2 by a second OLS regression in which being an immigrant decreases income reporting compliance by 5.2% ( $t$ -test,  $p = 0.001$ ; column 1). Taking into account numerous covariates (participant age, gender, real income, experimental income) only amplifies this outcome (column 2), with immigrants cheating 7.9% more of their income than natives ( $t$ -test,  $p = 0.005$ ). This immigration status effect on

<sup>2</sup>All the following regressions are estimated with standard errors clustered at the individual level, along with round and study fixed effects. Country fixed effects are not integrated here, as they are highly collinear by construct; on one hand, with tax morale as it is already a country level indicator, and on the other hand, with study fixed effects as some experiments are run in one country only. The regressions with country fixed effects are available in Table 8 in Appendix. We underscore that institutional or experimental variables such as tax rate, audit probability, fine size, framing etc. are not taken into account here but immigrants and natives take part to the same experiments and study fixed effects are here to capture any differences across experiments.



compliance does not only affect the average, but, as shown by the highly significantly lower compliance distribution for immigrants in Figure 1(b) (Kolmogorov-Smirnov test,  $p < 0.001$ ), it also impacts the distributions.

When we interact tax morale and immigration status (see Table 2, specification (4)), we observe that all variables turn out to be highly significant, including the interaction term ( $t$ -test,  $p < .001$ ). In other words, when the value of the tax morale indicator is very low (high)—signalling high (low) tax morale as in Japan (Haiti)—tax compliance is higher (lower) for natives than for immigrants. As a result, experiments conducted in high (low) tax morale countries show natives (immigrants) having more compliant tax behavior on average than immigrants (natives).

This latter observation raises the question of why individuals are more likely to evade taxes in an experiment conducted overseas than in one carried out in their native countries. Several factors may account for this difference: First, taxes are a highly nation- and society-specific issue, meaning that French immigrants living in Sweden, for example, might feel less obliged to file honest tax contributions to the Swedish state despite benefiting from the public goods these same taxes fund. This assumption is congruent with the finding that simply priming participants with their national flag prior to playing a tax evasion game increases natives' income declarations (Chan, 2019). Conversely, priming via videos of major Australian sporting moments while listening to the national anthem substantially reduces tax compliance among non-Australians (Macintyre et al., 2021). Given that in-group biases are widely documented in modern societies (Boyer, 2018; Balafoutas et al., 2020), such priming may trigger out-group feelings. Christakis (2019), for instance, posits that intergroup conflicts, rather than being a consequence of group identity, may be the cause of it. At the same time, immigrants may more readily accept self-serving justifications for noncompliance without feeling affected by their moral costs (Dulleck et al., 2016) or experiencing any related cognitive dissonance (Festinger, 1957). They may rationalize their dishonesty, for example, by their need for money as immigrants (Shalvi et al., 2015). Lower compliance might also result from immigrants not having sufficiently mastered the language of the host country (Jacquemet et al., 2020). Another consideration is the different sources of selection or self-selection; for instance, even when our main immigration result is robust once income is controlled for (see Table 2, specification (2)), different family wealth levels (e.g., from poorer to richer) could explain why immigrants are more to less acquisitive or behave so differently from natives. Because participants in our meta-analysis, being relatively young, have had little time to fully integrate into the/a society, they might be feeling far less reciprocal with their host country, especially if staying there only a short time for overseas study. Patriotism could also be at play through another channel: immigrants whose lack of patriotism made it easy for them to leave their origin country may feel just as little affinity for their new country of residence. A confounding effect could also impact the results when a great number of immigrants from lower tax morale countries move to higher tax morale nations.

Table 2: Univ/multivariate regressions of tax compliance on immigration status and tax morale

	OLS (1)	OLS (2)	OLS (3)	OLS (4)
Immigrant	-0.05†† (0.016)	-.07†† (0.028)	– –	-0.52††† (0.122)
Tax morale	– –	– –	-0.09††† (0.025)	-0.29††† (0.048)
Immigrant#Tax morale	– –	– –	– –	0.25††† (0.057)
Constant	0.54††† (0.023)	0.38††† (0.045)	0.86††† (0.078)	1.41††† (0.140)
$R^2$	0.05	0.03	0.04	0.04
# obs	58,514	22,854	34,930	34,930
# cluster	4,981	941	3,644	3,644
round FE	YES	YES	YES	YES
study FE	YES	YES	YES	YES
other FE	NO	YES	NO	NO

**Notes.** OLS regressions on the full sample of compliance. Other fixed effects include age, gender, experimental income and monthly income. Standard errors clustered at the individual level are presented between parentheses.  
Significance levels: 5% 1% 0.1%

### 3.3 Alternative explanations

One possible alternative explanation for our results is that the lack of mastery of the language in which the experiment was conducted prevented the immigrant participant from understanding the tax experimental instructions, thereby increasing uncertainty and possibly inducing more cheating. This deterrent effect of uncertainty on tax compliance is already well documented in the literature (e.g. Beer et al., 2016; McKee et al., 2018; Vossler and McKee, 2017). To examine this question, we separate the immigrants into two subsamples, immigrant-speakers and immigrant-nonspeakers, comparing their outcomes (middle part of Table 1), as well as their average compliance rates and compliance decision distributions (Figure 1(a) and Figure 1(b), respectively). According to the results, average and median compliance do not differ significantly between the two subsamples ( $t$ -test,  $p = 0.1208$ ; Wilcoxon rank-sum test,  $p = 0.1584$ ) although compliance distribution differ significantly (Kolmogorov-Smirnov test,  $p < .001$ ). Given that this disparity probably stems from the higher number of full compliers among immigrant-nonspeakers ( $t$ -test,  $p < 0.0001$ ), the evidence does not support the assumption that speaking the language of game implementation drives the main immigration effect.

Another alternative explanation is that our participants have no representative features of the general immigrant population. Hence, despite having already shown that the main effect persists when age is taken into account (Table 2, specification (2)), in Appendix Table 5, we reproduce the same estimation. Here, when we interact the immigration status with an age dummy, set at a cutoff of 30 and younger versus older (specification (1)), we observe a settling effect of age by which older natives comply more than younger natives ( $t$ -test,  $p = 0.006$ ) and immigrants ( $t$ -test,  $p < 0.001$ ). Nonetheless, older natives behave no better than older immigrants ( $t$ -test,  $p = 0.642$ )

even though the coefficient is still negative.

These findings may be interpreted in three different ways: First, immigration’s negative effect on tax compliance may disappear as individuals spend more time in the host country, although we have no information on the age at which participants immigrated, which could be critical. Second, people simply comply more with age and this age effect is stronger for immigrants than for natives. Third, because the age criterion shrunk our sample by 90%, we have too few participants 30 years old and above to draw any valid conclusions about this effect. These explanations may equally apply to our findings from specification (2) on participant occupation (i.e., student vs. nonstudent) given that older participants are overrepresented in the nonstudent category. Although no significant differences were found between native students and either nonstudent immigrants ( $t$ -test,  $p = 0.675$ ) or nonstudent natives ( $t$ -test,  $p = 0.165$ ), they comply more than student immigrants ( $t$ -test,  $p < 0.001$ ).

One last alternative is that the immigration effect could be driven by participants from low tax morale countries immigrating to high tax morale countries. Hence, in Appendix Table 5, specification (3), we employ a dummy that captures the low to high tax morale movement and another that captures the reverse. We observe no significant differences, indicating that the move from low to high tax morale countries is not driving the immigration effect.

### 3.4 Determinants of the tax gap between natives and immigrants

To pinpoint the determinants of the native-immigrant tax compliance gap, we first define a new dependent variable, difference in tax compliance, where we subtract native mean tax compliance from that of immigrants in the corresponding country:

$$\text{Difference in Tax compliance} = Y_i - \bar{Y}_n \quad (1)$$

where  $Y_i$  is the tax compliance for an immigrant  $i$ , and  $\bar{Y}_n$ , the average tax compliance in this immigrant’s host country. Next, because various environmental and social differences between residence and birth countries may be important factors in this gap, we measure the following distance types: national affinity, geographic, administrative, political, knowledge, global connect- edness, financial, economic, demographic, cultural, tax morale, and spatial (*distance in km*; see Table 3).

Although the first distance type, Affinity of Nations (Gartzke, 2010), is representable by sev- eral interchangeable variables, including *s3un4608*, *s2un4608*, *s3un4608i*, and *s2un4608i*, we focus on *s3un4608* with the understanding that substituting any of the others would not change the conclusions drawn. After computing distance in km from data provided by the Centre d’Études Prospectives et d’Informations Internationales (CEPII:2011-25), we extract all other distance vari- ables from the 2008 dataset compiled by Berry et al. (2010) except for tax morale, which we calculate by subtracting residence country tax morale from origin country tax morale as follows:

$$\text{Tax morale distance} = \bar{X}_i - \bar{X}_n \quad (2)$$

where  $\bar{X}_i$  is the average value of the tax morale indicator in the immigrant’s country of origin, and  $\bar{X}_n$  is its average value in the country of residence.

In Table 4, the first two specifications refer to the multivariate OLS regressions, which address the two geographic distance measures (geographic and distance\_km, respectively), and the next 12 to the univariate OLS regressions. We expect a negative correlation between the national affinity index and the compliance gap (greater affinity, lower gap) and a positive correlation with all other variables (greater distance, larger gap). In both regression types, Affinity of Nations is the only variable with a highly statistically significant impact ( $t$ -test,  $p < 0.001$ ). It also has the most substantial influence of all variables, in the expected negative direction. Global connectedness, on the other hand, although it significantly impacts the gap in the expected positive direction, does so only in the multivariate analysis ( $t$ -test,  $p < 0.05$ ), and the significant impact of demographic distance is in the counterintuitive negative direction ( $t$ -test,  $p < 0.05$ ). Even the significant impact of the two geographic distance measures is extremely low in the univariate analysis. In fact, the only measure that seems to have a highly significant and positive impact on the tax compliance difference is political distance ( $t$ -test,  $p < 0.001$ ), which actually appears to narrow the gap among immigrants.<sup>3</sup>

## 4 Conclusion

In this study, we assess the difference in tax compliance between immigrants and natives using a meta-analysis of experimental tax game data for 4,900 participants in 13 countries across the globe. To explore the impact of cultural norms on tax compliance in these games, we also correlate compliance with tax morale values of participants’ respective home countries based on responses to a tax morale question in three waves of the WVS. In addition to documenting a very significant correlation between tax morale and tax compliance, we find that immigrants exhibit significantly less compliance than natives even after we control for numerous covariates (income, age, gender, experimental income, host country language proficiency). This persistent compliance gap is reduced, however, by the political distance between host and origin countries. We also note a significant interaction between tax morale and immigration status in which immigrants from high (low) tax morale countries are more (less) tax compliant than natives.

Because experimental participants enter the laboratory with “autobiographical experiential knowledge” that is filtered by contextual circumstances and exposures to past life experiences

---

<sup>3</sup>To test further those distance measures, we feature alternative specifications in the Appendix, where we use the absolute value of difference in tax compliance in Table 5 and we squared the explanatory variables in Table 6 and Table 7 to capture any curvilinear relationship between difference in tax compliance and distance measures. The conclusions remain unchanged.

Table 3: Distance variables: Definitions and summary statistics

Variable	Based on	Mean	SD	Min	Max	# Obs.
Difference in compliance	Tax compliance gap between immigrant country of origin and country of residence	0.02	0.40	-0.75	0.51	11,990
Affinity of Nations	Country votes at United Nations General Assembly	0.93	0.25	-0.75	1	52,016
Geographic distance	Distance between geographic center of two states	637.37	2,215.25	0	18,561.67	59,053
Administrative distance	Whether countries share a colonial tie/same legal system, % population that speak the same language/ share the same religion	1.24	4.89	0	77.41	59,053
Political distance	Political stability measured by independent institutional actors with veto power, general government final consumption expenditure, pre-1993 membership in WTO and GATT, existing regional trade agreement	37.09	79.22	0	312	59,007
Knowledge distance	Number of patents per one million population, of scientific articles per one million population	0.93	3.42	0	58.55	57,493
Global Connectedness Distance	International tourism, expenditures and receipts, Internet users per 1,000 population	0.30	1.28	0	26.26	59,012
Financial distance	Domestic credit to private sector, market capitalization of main listed companies, number of listed companies	0.76	3.93	0	56.97	58,890
Economic distance	GDP per capita, inflation, exports and imports of goods and services	1.06	5.56	0	88.80	59,023
Demographic distance	Life expectancy at birth, birth rate, population aged 0-14 and 65 and above	0.54	1.79	0	22.26	59,053
Cultural distance	WVS questions on obedience and respect for authority, trusting people, independence and the role of government in providing for its citizens, and the importance of family and work	2.40	5.59	0	58.25	58,697
Distance in km	Distance between two capital cities	729.79	2,379.13	0	19,120.26	59,286
Tax morale distance	Gap in tax morale between immigrant country of origin and country of residence	0.21	0.55	-1.22	3.76	4,335

**Notes.** Definition and summary statistics of difference of compliance and distance variables. Number of observations varies according to the availability of original data. Variable *s9un4608* represents Affinity of Nations.

Table 4: Multi/univariate OLS regressions of distance measures on tax compliance difference

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)	OLS (13)	OLS (14)
Affinity of Nations	-0.20 <sup>††</sup> (0.061)	-0.21 <sup>†††</sup> (0.062)	-0.19 <sup>†††</sup> (0.033)											
Geographic	-9e-09 (0.000006)			0.000009 <sup>†</sup> (0.0000004)										
Administrative	0.0009 (0.002)	0.0009 (0.002)			0.0002 (0.001)									
Political	0.0007 (0.0004)	0.0007 (0.0004)				0.001 <sup>†††</sup> (0.00002)								
Knowledge	-0.004 (0.002)	-0.004 (0.002)					0.003 (0.003)							
Global connectedness	0.02 <sup>†</sup> (0.009)	0.02 <sup>†</sup> (0.009)						0.006 (0.005)						
Financial	-0.0009 (0.003)	-0.001 (0.003)							-0.002 (0.001)					
Economic	-0.004 (0.002)	-0.004 (0.002)							-0.001 (0.001)					
Demographic	-0.01 <sup>†</sup> (0.006)	-0.01 <sup>†</sup> (0.006)								-0.005 (0.004)				
Culture	-0.002 (0.003)	-0.002 (0.003)									-0.0002 (0.002)			
Distance_km		-0.000002 (0.000006)										0.000008 <sup>†</sup> (0.000004)		
Tax morale	-0.0004 (0.037)	-0.0003 (0.037)											-0.02 (0.030)	
Constant	-0.13 (0.137)	-0.10 (0.141)	0.38 <sup>†††</sup> (0.108)	-0.09 <sup>†</sup> (0.044)	-0.09 <sup>†</sup> (0.044)	-0.25 <sup>†††</sup> (0.060)	-0.09 <sup>†</sup> (0.045)	-0.09 <sup>†</sup> (0.044)	-0.09 <sup>†</sup> (0.044)	-0.09 <sup>†</sup> (0.044)	-0.08 <sup>†</sup> (0.044)	-0.08 (0.049)	-0.09 <sup>†</sup> (0.044)	0.11 (0.066)
R <sup>2</sup>	0.07	0.07	0.05	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
# obs	3,734	3,734	4,720	11,757	11,757	11,711	11,012	11,716	11,594	11,727	11,757	11,401	11,990	4,335
# clusters	361	361	494	762	762	757	673	755	738	758	762	724	776	421
round FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
study FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

**Notes.** OLS regressions of distance measures on tax compliance difference. Affinity of Nations is represented by variable s3un4608. Standard errors clustered at the individual level are presented between parentheses. Significance levels: 5% 1% 0.1%

(Smith, 2010, p. 11), their decisions during the tax evasion games are colored by a preexisting set of beliefs, norms, and cultural attitudes, many from their homelands. The impact of immigrant status on tax compliance could thus be attributable to various such influences. For example, the level of patriotism felt first for the birth country and then for the new country of residence could affect willingness to obey tax laws. Alternatively, the challenges of the immigration experience could increase immigrants' propensity to acquisitiveness or make it easier for them to justify noncompliant behaviors on the basis of need. We also admit a possibility of self-selection and selection bias that could decrease the generalizability of our findings, although we are confident that, at least for our sample of laboratory game participants, the results clearly demonstrate the effect of immigrant status on tax evasion and compliance.

Nonetheless, we recognize that the very low  $R^2$ s in our results, although they stress the importance of sociodemographic and/or personality characteristics in compliance behavior, do not explain a large part of the latter (e.g., tax morale). Given that meta-analysis depends upon the availability of sufficient data, we underscore the need for additional tax evasion game experiments using more diverse participants, including not only older subjects and nonstudents, but also more residents of low tax morale countries, and even dual citizens. Future research might also usefully expand understanding of immigration's impact on tax crimes by conducting surveys and studies specifically on this phenomenon as well as its longevity. The knowledge pool could also benefit from more in-depth examination of the effects on tax compliance of different lengths of residence in the host country and the (perceived) extent of belonging, assimilation, integration, and identification.<sup>4</sup> Non-discriminatory treatment of immigrants (e.g., in relation to health care, schooling, and social security) may also promote immigrants' compliance behavior. In all these endeavors, given the importance of culture in highly decontextualized environments, the World Values Survey can serve as a useful tool for capturing compliance norms.

The results of these additional investigations, especially if they confirm our own findings, could generate substantial recommendations for both (experimental) economics and public policies. In doing so, however, researchers should systematically take into account an aspect frequently overlooked in laboratory experiments; namely, participant origins. Such consideration is important because too great a diversity of experimental subjects can reduce the ability to replicate findings (Camerer et al., 2016). With respect to public policies, our results imply that tax administrations in high tax morale countries should implement strategic audits specifically focused on foreigners, while those in low tax morale countries should target their native population more intensively. Nonetheless, specifying exactly how endogenous audit selection rules should be designed and implemented requires additional research evidence from outside the laboratory.

---

<sup>4</sup>Sen (2006) refers to the "cricket test" proposed by Lord Tebbit: "The test indicates that a well-integrated immigrant cheers for England in test matches against the country of the person's origin (such as Pakistan) when the two sides play each other" (p. 155).

## References

- Adres, E., Vashdi, D. R., and Zalmanovitch, Y. (2016). Globalization and the retreat of citizen participation in collective action: A challenge for public administration. *Public Administration Review*, 76(1):142–152.
- Alm, J. and Malézieux, A. (2020). 40 years of tax evasion games: A meta-analysis. *Experimental Economics*, pages 1–52.
- Alm, J., Martinez-Vazquez, J., and Torgler, B. (2006). Russian attitudes toward paying taxes-before, during and after the transition. *International Journal of Social Economics*, 33(12):832–857.
- Alm, J. and Torgler, B. (2006). Culture differences and tax morale in the united states and in europe. *Journal of Economic Psychology*, 27(2):224–246.
- Andrighetto, G., Zhang, N., Ottone, S., Ponzano, F., D’Attoma, J., and Steinmo, S. (2016). Are some countries more honest than others? evidence from a tax compliance experiment in sweden and italy. *Frontiers in Psychology*, 7:472.
- Balafoutas, L., García-Gallego, A., Georgantzis, N., Jaber-Lopez, T., and Mitrokostas, E. (2020). Rehabilitation and social behavior: Experiments in prison. *Games and Economic Behavior*, 119:148–171.
- Bastani, S., Giebe, T., and Miao, C. (2020). Ethnicity and tax filing behavior. *Journal of Urban Economics*, 116. 103215.
- Beer, S., Kasper, M., and Loeprick, J. (2016). Puzzling tax law–behavioral responses to complexity. Working Paper.
- Bergolo, M. L., Leites, M., Perez-Truglia, R., and Strehl, M. (2020). What makes a tax evader? Technical report, National Bureau of Economic Research.
- Berry, H., Guillén, M. F., and Zhou, N. (2010). An institutional approach to cross-national distance. *Journal of International Business Studies*, 41(9):1460–1480.
- Bianchi, M., Buonanno, P., and Pinotti, P. (2012). Do immigrants cause crime? *Journal of the European Economic Association*, 10(6):1318–1347.
- Borjas, G. J., Grogger, J., and Hanson, G. H. (2010). Immigration and the economic status of african-american men. *Economica*, 77(306):255–282.
- Boyer, P. (2018). *Minds make societies: How cognition explains the world humans create*. Yale University Press.
- Bruner, D. M., D’Attoma, J., and Steinmo, S. (2017). The role of gender in the provision of public goods through tax compliance. *Journal of Behavioral and Experimental Economics*, 71:45–55.
- Bühren, C. and Kundt, T. C. (2014). Does the level of work effort influence tax evasion? experimental evidence. *Review of Economics*, 65(2):137–158.
- Butcher, K. F. and Piehl, A. M. (1998a). Cross-city evidence on the relationship between immigration and crime. *Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management*, 17(3):457–493.
- Butcher, K. F. and Piehl, A. M. (1998b). Recent immigrants: Unexpected implications for crime and incarceration. *ILR Review*, 51(4):654–679.
- Camerer, C. F., Dreber, A., Forsell, E., Ho, T.-H., Huber, J., Johannesson, M., Kirchler, M., Almenberg, J., Altmeld, A., Chan, T., et al. (2016). Evaluating replicability of laboratory experiments in economics. *Science*, 351(6280):1433–1436.
- Casal, S., Kogler, C., Mittone, L., and Kirchler, E. (2016). Tax compliance depends on voice of taxpayers. *Journal of Economic Psychology*, 56:141–150.
- Chan, E. Y. (2019). Exposure to national flags reduces tax evasion: Evidence from the united states, australia, and britain. *European Journal of Social Psychology*, 49(2):300–312.



- Christakis, N. A. (2019). *Blueprint: The Evolutionary Origins of a Good Society*. Little, Brown Spark.
- Coricelli, G., Joffily, M., Montmarquette, C., and Villeval, M.-C. (2010). Cheating, emotions, and rationality: An experiment on tax evasion. *Experimental Economics*, 13(2):226–247.
- Coricelli, G., Rusconi, E., and Villeval, M.-C. (2014). Tax evasion and emotions: An empirical test of re-integrative shaming theory. *Journal of Economic Psychology*, 40:49–61.
- D’Attoma, J. (2019). What explains the north – south divide in italian tax compliance? an experimental analysis. *Acta Politica*, 54(1):104–123.
- D’Attoma, J., Volintiru, C., and Malézieux, A. (2020). Gender, social value orientation, and tax compliance. *CESifo Economic Studies*, 66(3):107–127.
- D’Attoma, J., Volintiru, C., and Steinmo, S. (2017). Willing to share? tax compliance and gender in europe and america. *Research & Politics*, 4(2).
- Doerrenberg, P. (2015). Does the use of tax revenue matter for tax compliance behavior? *Economics Letters*, 128:30–34.
- Doerrenberg, P. and Duncan, D. (2014a). Distributional implications of tax evasion: Evidence from the lab. *Public Finance Review*, 42(6):720–744.
- Doerrenberg, P. and Duncan, D. (2014b). Experimental evidence on the relationship between tax evasion opportunities and labor supply. *European Economic Review*, 68:48–70.
- Doerrenberg, P., Duncan, D., and Zeppenfeld, C. (2015). Circumstantial risk: Impact of future tax evasion and labor supply opportunities on risk exposure. *Journal of Economic Behavior & Organization*, 109:85–100.
- Dulleck, U., Fooker, J., Newton, C., Ristl, A., Schaffner, M., and Torgler, B. (2016). Tax compliance and psychic costs: Behavioral experimental evidence using a physiological marker. *Journal of Public Economics*, 134:9–18.
- Etchart-Vincent, N. and Taugourdeau, E. (2018). The influence of tax morality and others’ tax evasion on one’s fiscal behaviour. Working Paper.
- Festinger, L. (1957). *A theory of cognitive dissonance*, volume 2. Stanford University Press.
- Fisar, M., Reggiani, T., Sabatini, F., and Špalek, J. (2020). Media bias and tax compliance: Experimental evidence. Working Paper.
- Fortin, B., Lacroix, G., and Villeval, M.-C. (2007). Tax evasion and social interactions. *Journal of Public Economics*, 91(11-12):2089–2112.
- Gartzke, E. (2010). The affinity of nations: Similarity of state voting positions in the unga. Working Paper.
- Guerra, A. and Harrington, B. (2018). Attitude–behavior consistency in tax compliance: A cross-national comparison. *Journal of Economic Behavior & Organization*, 156:184–205.
- Hartl, B., Hofmann, E., Gangl, K., Hartner-Tiefenthaler, M., and Kirchler, E. (2015). Does the sole description of a tax authority affect tax evasion? the impact of described coercive and legitimate power. *PloS one*, 10(4). e0123355.
- Heinemann, F. and Kocher, M. G. (2013). Tax compliance under tax regime changes. *International Tax and Public Finance*, 20(2):225–246.
- Jacquemet, N., Luchini, S., Malézieux, A., and Shogren, J. (2020). Who’ll stop lying under oath? empirical evidence from tax evasion games. *European Economic Review*, 124. 1033369.
- Kogler, C., Mittone, L., and Kirchler, E. (2016). Delayed feedback on tax audits affects compliance and fairness perceptions. *Journal of Economic Behavior & Organization*, 124:81–87.
- Macintyre, A., Chan, H. F., Schaffner, M., and Torgler, B. (2021). National pride and tax compliance: A laboratory experiment using a physiological marker (no. 2021-07). Center for Research in Economics, Management and the Arts (CREMA). Working Paper.

- Malézieux, A. (2016). An investigation of the direct democracy effect of voting on tax fund destination. Working Paper.
- Malézieux, A. (2018). A practical guide to setting up your tax evasion game. *Journal of Tax Administration*, 4(1):107–127.
- McKee, M., Siladke, C. A., and Vossler, C. A. (2018). Behavioral dynamics of tax compliance when taxpayer assistance services are available. *International Tax and Public Finance*, 25(3):722–756.
- Ottone, S., Ponzano, F., and Andrighetto, G. (2018). Tax compliance under different institutional settings in the eu: An experimental analysis. *Economia Politica*, 35(2):367–402.
- Schneider, F. and Klinglmair, R. (2004). Shadow economies around the world: what do we know? CREMA Working Paper Series, 2004-03.
- Sen, A. I. (2006). *Violence: the Illusion of Destiny*. New York-London: WW Norton and Company.
- Shalvi, S., Gino, F., Barkan, R., and Ayal, S. (2015). Self-serving justifications: Doing wrong and feeling moral. *Current Directions in Psychological Science*, 24(2):125–130.
- Smith, V. L. (2010). Theory and experiment: What are the questions? *Journal of Economic Behavior & Organization*, 73(1):3–15.
- Stewart, L. A., Clarke, M., Rovers, M., Riley, R. D., Simmonds, M., Stewart, G., and Tierney, J. F. (2015). Preferred reporting items for a systematic review and meta-analysis of individual participant data: the prisma-ipd statement. *Jama*, 313(16):1657–1665.
- Torgler, B. (2005). Tax morale in latin america. *Public Choice*, 122(1-2):133–157.
- Torgler, B. (2007). *Tax compliance and tax morale: A theoretical and empirical analysis*. Cheltenham, UK: Edward Elgar Publishing.
- Torgler, B. (2016). Tax compliance and data: What is available and what is needed. *Australian Economic Review*, 49(3):352–364.
- Torgler, B., Schaffner, M., and Macintyre, A. (2010). Tax compliance, tax morale, and governance quality. In Alm, J., Martinez-Vazquez, J., and Torgler, B., editors, *Developing Alternative Frameworks for Explaining Tax Compliance*, pages 56–73. London: Routledge.
- Torgler, B. and Schneider, F. (2009). The impact of tax morale and institutional quality on the shadow economy. *Journal of Economic Psychology*, 30(2):228–245.
- Vossler, C. A. and McKee, M. (2017). Efficient tax reporting: The effects of taxpayer liability information services. *Economic Inquiry*, 55(2):920–940.
- Weidenfeld, K. and Spire, A. (2015). *L’impunité fiscale: Quand l’État brade sa souveraineté*. La Découverte.
- Zhang, N., Andrighetto, G., Ottone, S., Ponzano, F., and Steinmo, S. (2016). Willing to pay? tax compliance in britain and italy: An experimental analysis. *PloS One*, 11(2). e0150277.

## 5 Appendix

### 5.1 Spatial distance between residence and birth country

Table 5: Multi/Univariate OLS regressions of distance measures on absolute value of tax compliance difference

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)	OLS (13)	OLS (14)
Affinity of Nations	-0.04 (0.028)	-0.03 (0.029)	-0.02 <sup>†</sup> (0.014)											
Geographic	-0.000002 (0.000002)			-0.0000002 (0.0000001)										
Administrative	0.0001 (0.0006)	0.0001 (0.0006)			-0.0006 (0.0005)									
Political	-0.0003 (0.0001)	-0.0003 (0.0001)				0.00003 (0.0001)								
Knowledge	0.0005 (0.001)	0.0005 (0.001)				0.0007 (0.001)								
Global connectedness	-0.006 <sup>†</sup> (0.003)	-0.006 <sup>†</sup> (0.003)						-0.001 (0.001)						
Financial	0.004 <sup>††</sup> (0.001)	0.004 <sup>††</sup> (0.001)						0.0003 (0.0007)						
Economic	0.002 <sup>†</sup> (0.001)	0.002 <sup>†</sup> (0.001)							0.0004 (0.0005)					
Demographic	-0.002 (0.003)	-0.002 (0.003)								-0.004 <sup>†</sup> (0.002)				
Culture	0.004 <sup>†††</sup> (0.001)	0.004 <sup>†††</sup> (0.001)									0.001 (0.0008)			
Distance_km		-0.0000006 (0.000002)										0.0000008 (0.000001)		
Tax Morale	-0.01 (0.013)	-0.01 (0.013)											0.0007 (0.011)	
Constant	0.46 <sup>†††</sup> (0.062)	0.45 <sup>†††</sup> (0.065)	0.41 <sup>†††</sup> (0.031)	0.40 <sup>†††</sup> (0.016)	0.40 <sup>†††</sup> (0.016)	0.39 <sup>†††</sup> (0.024)	0.40 <sup>†††</sup> (0.016)	0.40 <sup>†††</sup> (0.016)	0.40 <sup>†††</sup> (0.016)	0.40 <sup>†††</sup> (0.016)	0.40 <sup>†††</sup> (0.016)	0.39 <sup>†††</sup> (0.018)	0.40 <sup>†††</sup> (0.016)	0.28 <sup>†††</sup> (0.042)
R <sup>2</sup>	0.04	0.04	0.009	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.008
# obs	3,734	3,734	4,720	11,757	11,757	11,711	11,012	11,716	11,594	11,727	11,757	11,401	11,990	4,335
# clusters	361	361	494	762	762	757	673	755	738	758	762	724	776	421
round FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
study FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

**Notes.** OLS regressions of distance measures on absolute value of tax compliance difference from immigrants to the mean of their country of residence. Variable *s3un4608* represents Affinity of Nations. Standard errors clustered at the individual level are presented between parentheses. Significance levels: 5% 1% 0.1%

Table 6: Multivariate OLS regressions of distance measures on tax compliance difference

	OLS (1)	OLS (2)
Affinity of Nations	-0.25 <sup>††</sup> (0.093)	-0.28 <sup>††</sup> (0.098)
<i>AffinityofNations</i> <sup>2</sup>	0.02 (0.158)	0.01 (0.142)
Geographic	-0.00002 (0.00003)	
<i>Geographic</i> <sup>2</sup>	1e-09 (1e-09)	
Administrative	0.005 (0.005)	0.005 (0.005)
<i>Administrative</i> <sup>2</sup>	-0.00006 (0.00007)	-0.00006 (0.00007)
Political	-0.0009 (0.002)	-0.0006 (0.002)
<i>Political</i> <sup>2</sup>	0.000003 (0.000005)	0.000002 (0.000005)
Knowledge	-0.004 (0.008)	-0.003 (0.008)
<i>Knowledge</i> <sup>2</sup>	0.000009 (0.0001)	0.00001 (0.0001)
Global	0.01 (0.027)	0.01 (0.028)
<i>Global</i> <sup>2</sup>	0.0001 (0.001)	-0.00001 (0.001)
Financial	-0.02 (0.012)	-0.02 (0.012)
<i>Financial</i> <sup>2</sup>	0.0005 (0.0003)	0.0006 (0.0003)
Economic	0.008 (0.010)	0.010 (0.010)
<i>Economic</i> <sup>2</sup>	-0.0003 (0.0002)	-0.0003 (0.0002)
Demographic	-0.01 (0.020)	-0.01 (0.019)
<i>Demographic</i> <sup>2</sup>	0.0004 (0.0009)	0.0004 (0.0009)
Culture	-0.005 (0.012)	-0.003 (0.012)
<i>Culture</i> <sup>2</sup>	0.00002 (0.0003)	-0.00001 (0.0004)
Distance_km		-0.00003 (0.00002)
<i>Distance_km</i> <sup>2</sup>		1e-09 (1e-09)
Tax Morale	-0.02 (0.065)	-0.03 (0.067)
<i>TaxMorale</i> <sup>2</sup>	-0.001 (0.051)	.004 (0.051)
Constant	0.18 (0.277)	0.21 (0.260)
<i>R</i> <sup>2</sup>	0.08	0.09
# obs	3,734	3,734
# clusters	361	361
round FE	YES	YES
study FE	YES	YES

**Notes.** OLS regressions of distance measures on tax compliance difference from immigrants to the mean of their country of residence. Variable *s3un4608* represents Affinity of Nations. Standard errors clustered at the individual level are presented between parentheses.

Significance levels:      5%      1%      0.1%

Table 7: Univariate OLS regressions of distance measures on tax compliance difference

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)
Affinity of Nations	-0.223 <sup>†††</sup> (0.034)											
<i>Affinity of Nations</i> <sup>2</sup>	0.11 (0.071)											
Geographic		0.00002 (0.00001)										
<i>Geographic</i> <sup>2</sup>		-1e-09 (8e-10)										
Administrative			.002 (0.003)									
<i>Administrative</i> <sup>2</sup>			-0.000004 (0.00005)									
Political				-0.000496 (0.001)								
<i>Political</i> <sup>2</sup>				0.000003 (0.000003)								
Knowledge					0.01 <sup>†††</sup> (0.004)							
<i>Knowledge</i> <sup>2</sup>					-0.0003 <sup>†††</sup> (0.00008)							
Global						.01 (0.010)						
<i>Global</i> <sup>2</sup>						-0.0002 (0.0006)						
Financial							0.003 (0.007)					
<i>Financial</i> <sup>2</sup>							-0.0001 (0.0001)					
Economic								0.003 (0.004)				
<i>Economic</i> <sup>2</sup>								-0.00008 (0.00007)				
Demographic									0.003 (0.01)			
<i>Demographic</i> <sup>2</sup>									-0.0006 (0.0007)			
Culture										-0.004 (0.005)		
<i>Culture</i> <sup>2</sup>										.0001 (0.0001)		
Distance_km											0.00002 (0.00001)	
<i>Distance_km</i> <sup>2</sup>											-7e-10 (7e-10)	
Tax Morale												-0.0009 (0.043)
<i>TaxMorale</i> <sup>2</sup>												-0.02 (0.024)
Constant	0.30 <sup>†</sup> (0.122)	-0.10 <sup>†</sup> (0.045)	-0.09 <sup>†</sup> (0.044)	-0.11 (0.134)	-0.11 <sup>†</sup> (0.045)	-0.09 <sup>†</sup> (0.044)	-0.09 <sup>†</sup> (0.044)	-0.09 <sup>†</sup> (0.044)	-0.09 <sup>†</sup> (0.045)	-0.05 (0.060)	-0.10 <sup>†</sup> (0.045)	0.10 (0.066)
<i>R</i> <sup>2</sup>	0.05	0.03	0.02	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.01
# obs	4,720	11,757	11,757	11,711	11,012	11,716	11,594	11,727	11,757	11,401	11,990	4,335
# clusters	494	762	762	757	673	755	738	758	762	724	776	421
round FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
study FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

**Notes.** OLS regressions of distance measures on tax compliance difference from immigrants to the mean of their country of residence. Variable *s3un4608* represents Affinity of Nations. Standard errors clustered at the individual level are presented between parentheses.  
Significance levels: 5% 1% 0.1%

## 5.2 Regressions with country fixed effects

Table 8: Univ/multivariate regressions of tax compliance on immigration status and tax morale

	OLS (1)	OLS (2)	OLS (3)	OLS (4)
Immigrant	-0.04† † † (0.016)	-.07† † † (0.028)	– –	-0.43† (0.259)
Tax morale	– –	– –	-0.05† (0.029)	-0.27†† (0.122)
Immigrant#Tax morale	– –	– –	– –	0.21† (0.124)
Constant	0.54† † † † (0.027)	0.74† † † † (0.061)	0.62† † † † (0.065)	1.04† † † † (0.246)
$R^2$	0.05	0.03	0.05	0.05
# obs	58,514	22,854	34,930	34,930
# cluster	4,981	941	3,644	3,644
round FE	YES	YES	YES	YES
study FE	YES	NO	YES	YES
country FE	YES	YES	YES	YES
other FE	NO	YES	NO	NO

**Notes.** OLS regressions on the full sample of compliance. Other fixed effects include age, gender, experimental income and monthly income. Standard errors clustered at the individual level are presented between parentheses.

Significance levels: †: 10% ††: 5% †††: 1% ††††: 0.1%

### 5.3 Alternative explanations

Table 9: OLS regressions of tax compliance on immigration status

	OLS (1)	OLS (2)	OLS (3)
Immigrant=0#Young=0	0 (.)		
Immigrant=0#Young=1	-0.05 <sup>††</sup> (0.018)		
Immigrant=1#Young=0	-0.02 (0.057)		
Immigrant=1#Young=1	-.10 <sup>†††</sup> (0.023)		
Immigrant=0#Nonstudent=0		0 (.)	
Immigrant=0#Nonstudent=1		0.03 (0.022)	
Immigrant=1#Nonstudent=0		-0.05 <sup>††</sup> (0.017)	
Immigrant=1#Nonstudent=1		0.01 (0.041)	
Immigrants <sub>Low to High</sub>			-0.02 (0.026)
Immigrant <sub>High to Low</sub>			0.01 (0.029)
Constant	0.59 <sup>†††</sup> (0.029)	0.53 <sup>†††</sup> (0.023)	0.54 <sup>†††</sup> (0.023)
$R^2$	0.05	0.03	0.05
# obs	58,487	55,813	50,859
# clusters	4,978	4,522	4,626
round FE	YES	YES	YES
study FE	YES	YES	YES

**Notes.** The variable *Young* is equal to 1 when participants are under 30 years of age, 0 otherwise. The variable *Immigrant<sub>Low to High</sub>* is equal to 1 when participants are immigrants from low to high tax morale countries, 0 when they are natives or immigrants from high to low tax morale countries. The variable *Immigrant<sub>High to Low</sub>* is equal to 1 when participants are immigrants from high to low tax morale countries, 0 when they are natives or immigrants from low to high tax morale countries. When there is no data on tax morale, the observation is considered to be missing. Standard errors clustered at the individual level are presented between parentheses.

Significance levels:    5%    1%    0.1%



## 5.4 Studies included

Table 10: Studies included in our meta-analysis

Study	# Obs	# cluster	Country
Adres et al. (2016)	897	897	multiple (4)
Andrighetto et al. (2016)	18,930	2106	multiple (5)
Bruner et al. (2017)	18,930	2106	multiple (5)
Bühren and Kundt (2014)	450	150	Germany
Casal et al. (2016)	492	123	Austria
Coricelli et al. (2014)	960	32	France
Coricelli et al. (2010)	1,440	96	France
D’Attoma (2019)	18,930	2106	multiple (5)
D’Attoma et al. (2020)	7,171	1233	multiple (5)
D’Attoma et al. (2017)	18,930	2106	multiple (5)
Doerrenberg and Duncan (2014a)	495	45	Germany
Doerrenberg and Duncan (2014b)	495	45	Germany
Doerrenberg (2015)	1,134	126	Germany
Doerrenberg et al. (2015)	90	90	Germany
Dulleck et al. (2016)	3,420	180	Australia
Etchart-Vincent and Taugourdeau (2018)	720	240	France
Fortin et al. (2007)	670	132	France
Guerra and Harrington (2018)	1,620	180	multiple (2)
Hartl et al. (2015)	26,880	726	Austria
Heinemann and Kocher (2013)	1,600	80	Germany
Kogler et al. (2016)	2,772	126	Austria
Malézieux (2016)	500	250	France
Ottone et al. (2018)	18,930	2106	multiple (5)
Fisar et al. (2020)	1,100	220	Czech Republic
Zhang et al. (2016)	18,930	2106	multiple (5)

**Notes.** One dataset can be the object of different publications.

## 5.5 Countries and nationalities included

Table 11: Countries and nationalities

Country	Nationalities	# Obs	Country	Nationalities	# Obs
Australia	Australia	1,072	Germany	Afghanistan	3
	Bhutan	76		Austria	3
	China	722		Bulgaria	3
	Colombia	19		Denmark	3
	France	19		Germany	3,473
	Germany	57		Italy	3
	Hong Kong	266		Poland	3
	India	95		Russia	9
	Iran	19		Tajikistan	3
	Italy	19		Ukraine	6
	Japan	19	Israel	Israel	215
	Malaysia	190	Italy	Albania	18
	Mexico	19		Egypt	6
	Mongolia	19		Italy	2,530
	New Zealand	19		Nigeria	6
	Norway	19		Switzerland	6
	Peru	19		Venezuela	6
	Philippines	38	Romania	Moldova	75
	Salvador	19		Romania	3,306
	Singapore	171		Turkey	9
	South Korea	38	Sweden	Armenia	15
	Sri Lanka	38		Belarus	9
	Surinam	19		Belgium	9
	Taiwan	209		Bulgaria	3
	Thailand	57		Canada	9
	United Kingdom	57		China	36
	Vietnam	133		Colombia	9
Austria	Austria	18,440		Croatia	9
	Germany	6,480		Cuba	3
	Italy	66		Denmark	21
Colombia	Colombia	245		Ecuador	6
Czech Republic	Czech Republic	815		Estonia	24
	Slovakia	265		Ethiopia	3
Denmark	Denmark	666		Finland	39
France	France	2,388		France	33

Country	Nationalities	# Obs	Country	Nationalities	# Obs
Sweden	Germany	48	United Kingdom	China	45
	Greece	9		Cyprus	6
	Hungary	9		Egypt	6
	India	30		Eire	9
	Irak	12		France	36
	Iran	39		Germany	54
	Italy	15		Ghana	9
	Kenya	3		Greece	9
	Latvia	3		Hong Kong	54
	Mexico	9		Hungary	18
	Moldova	6		India	81
	Mozambique	9		Iran	6
	Netherlands	12		Ivory Coast	9
	Norway	3		Jamaica	6
	Pakistan	3		Japan	27
	Peru	6		Kenya	12
	Philippines	24		South Korea	9
	Poland	18		Lithuania	6
	Romania	15		Luxembourg	9
	Russia	75		Malaysia	51
	Spain	6		Nepal	27
	Sweden	3,053		Netherlands	9
	Taiwan	9		New Zealand	9
	Turkey	21		Nigeria	33
	United Kingdom	9		Pakistan	15
	United States	12		Philippines	42
	Ukraine	39		Poland	54
United Kingdom	Afghanistan	15		Romania	33
	Australia	15		Russia	9
	Bangladesh	10		Singapore	18
	Belgium	9		Somalia	15
	Brunei	6		South Africa	30
	Bulgaria	24		Spain	9
	Burundi	9		Sri Lanka	9
	Cameroon	6		Trinidad and Tobago	12
	Canada	9		Turkey	9

Country	Nationalities	# Obs	Country	Nationalities	# Obs
United Kingdom	United States	81	United States	Nepal	6
	United Kingdom	4,600		Nigeria	15
	Ukraine	27		Norway	15
	Virgin Islands	6		Oman	9
	Zimbabwe	17		Peru	12
United States	Albania	15		Philippines	51
	Argentina	9		Puerto Rico	6
	Armenia	9		Russia	18
	Australia	6		Saudi Arabia	6
	Bangladesh	12		Singapore	9
	Bolivia	6		Spain	9
	Brazil	6		Taiwan	9
	Canada	21		United States	6,493
	Chile	24		United Kingdom	18
	China	156		Ukraine	15
	Colombia	15		Vietnam	12
	Costa Rica	15			
	Dominican Republic	6			
	Ecuador	9			
	Ethiopia	6			
	France	6			
	Germany	18			
	Ghana	9			
	Haiti	6			
	Hong Kong	9			
	India	90			
	Indonesia	9			
	Israel	15			
	Italy	6			
	Jamaica	9			
	Japan	62			
	Kenya	6			
	South Korea	75			
	Malaysia	18			
	Mexico	72			
	Mongolia	6			

**Notes.** This Table represents the 13 countries and the 95 nationalities gathered from the original published studies. Countries with only natives (Denmark, Colombia, Israel...) are not included in native vs. immigrants analyses but are taken into account in the tax morale analyses.