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Abstract

We investigate why immigrants are willing to be tax compliant and how their willingness to be tax compliant may differ from non-immigrants. To undertake this exploratory investigation, we conduct a survey (n=4,670) of adult taxpayers in Canada, Germany, and the United Kingdom. Just over 10% of this sample (n=492) is immigrants. To frame this study, we use political science literature on citizenship to develop and test a model of fiscal citizenship. Our model consists of four factors (voice, contribution, social exclusion, and tax compliance). The voice and contribution factors have subfactors. Accordingly, we investigate the association of each factor and subfactor on tax compliance. Results indicate that immigrants are willing to be tax compliant if they have a voice in the tax policy process in the form of a vote but not in a less formal way, and if there are few restrictions on who receives government benefits. Moreover, results indicate that non-immigrants are unwilling to be tax compliant if they have a voice (vote or otherwise) in the tax policy process. And, results indicate no significant association between moral obligation and tax compliance for immigrants, whereas this association is positive and significant for non-immigrants. Our study has implications for governments which are challenged with anti-immigrant sentiments, as our results suggest circumstances in which immigrants are willing to pay income taxes.

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I. Introduction

Anti-immigrant sentiment can be fueled by terrorism (Williams & Burnap 2016) or societal anxieties about demographic shifts and political and economic uncertainty (Yates et al. 2023). Besides increasing civil unrest and societal worry, anti-immigrant sentiment can undermine democracy if political power of immigrant communities is limited through discriminatory laws and practices, such as voter ID laws (Yates et al. 2023). Anti-immigrant sentiment can also lead to hate crimes, isolationism and other forms of discrimination (Basaleh 2023).

One context in which immigration has seldom been examined is income tax compliance. In general, tax evasion, the opposite of tax compliance, is a staggeringly expensive global problem (Schneider 2022).¹ As the primary source of any country's tax revenues is from personal income taxes (OECD 2022), and as personal income tax is the most likely source

¹ Tax compliance is making correct tax reporting decisions in accordance with tax laws. Tax evasion is an intentional disregard of tax laws.

of tax evasion (Gale & Krupkin 2019), understanding why individuals are willing to be tax compliant is an important goal for any nation.

Considerable research exists about individuals' willingness to be tax compliant (for reviews, see Alm, 2019; Kirchler, 2007; Slemrod, 2019). Tax compliance research uses two primary paradigms (Alm et al., 2012). One is a deterrence paradigm, in which tax compliance is modeled as a risky decision with uncertainty. Individuals will be compliant if they think the economic losses from tax evasion (penalties) are more likely than economic gains from tax evasion. The other is a socio-psychological paradigm, in which individuals will be compliant if they have sufficiently high tax morale. Tax morale is an abstract concept referring to someone's intrinsic willingness to be cooperative with a tax authority (Kornhauser, 2007). Of these, the socio-psychological paradigm is more powerful at explaining why people are tax compliant (Kirchler 2021).

Existing socio-psychological research about tax compliance shows that factors such as taxpayers' perceptions of fairness, social norms, trust in institutions, and civic duty are influential in improving compliance attitudes (Bobek et al. 2013; Feld & Frey 2007; Goslinga et al. 2018; Marshall et al. 2024). A research gap in this literature is why certain population clusters may be willing to be tax compliant. Furthermore, the theoretical framing of tax morale is inconsistent, with studies identifying possible dimensions of tax morale without any unifying theoretical basis (e.g., Kornhauser 2007; Luttmer & Singhal 2014) or simply using tax morale as a generic unidimensional construct (e.g., Alm & Torgler 2006; Matthaei et al. 2023).

To address this research gap and provide theoretical clarity about tax morale, we investigate why immigrants (individuals who have moved from their country of birth to another country) are willing to be tax compliant. There are close to 300 million people worldwide who are immigrants and immigration is steadily increasing, especially from developing to developed countries (IOM 2020).² To the best of our knowledge, only two empirical studies investigate tax compliance behaviour of immigrants. Løyland & Øvrum (2017) study tax compliance behaviour of Norwegian immigrants following a tax audit and find that immigrants from countries with higher corruption scores are less compliant than immigrants from countries with lower corruption scores. DeBacker et al. (2015) find that corporate tax evasion in the United States is higher when an owner/shareholder is an immigrant from a country with a high corruption score relative to an immigrant from a country with a low corruption score. These two studies suggest that immigrants might bring with them tax attitudes that differ from the norms of the native population of taxpayers. Moreover, these two studies do not explain why immigrants might be willing to be tax compliant. Given possible anti-immigrant sentiment in welfare states (Brady & Finnigan 2014) as well as recognition by governments that immigration is a "phenomenon to be managed" through public administration (Wasem 2018, p. 97), the issue of immigrants' tax morale is of practical importance to governments of countries which accept immigrants. Anti-immigrant sentiment because of misperceptions about income tax compliance is a thorny issue unless there is empirical evidence about immigrants' willingness to be tax compliant.

We pose two exploratory research questions: 1) Why are immigrants willing to be tax compliant? 2) How does immigrants' willingness to be tax compliant compare to non-

² Total migration levels in developed countries is nearly double migration levels in developing countries (United Nations 2020).

immigrants?³ To address these questions, and also to provide empirical and theoretical clarity to the broader socio-psychological literature about tax morale and tax compliance, we develop and test a theoretical model of fiscal citizenship, adapted from political science literature about citizenship and its dimensions (Bloemraad et al., 2008; Delanty, 1997; Isin & Turner, 2002; Van Bochove & Rusinovic, 2008). Fiscal citizenship is a normative construct referring to taxation as a social contract between the state and its citizens (Freund, 2019; Mehrotra, 2008, 2015; Zelenak, 2013). We use citizenship literature to understand tax compliance attitudes of immigrants following Delanty's (1997, p. 288) observation, "If citizenship is centrally concerned with defining the relationship between the individual and the state, immigrants, it may be suggested, as newcomers to a polity, are the test case of citizenship." Thus, we expect that fiscal citizenship can provide a lens through which to view immigrant' willingness to pay taxes as part of their social contract between themselves and their new country.

We begin by conducting a scale development study about fiscal citizenship (Part 1). Since existing research about fiscal citizenship is entirely normative rather than empirical (e.g., Freund, 2019; Guano, 2010; Makovicky & Smith, 2020; Morgen & Erickson, 2017; Roitman, 2007; Sparrow, 2008), we develop domain-specific items to measure possible dimensions of fiscal citizenship. We then survey 4,670 taxpayers from Canada, Germany, and the United Kingdom and conduct exploratory factor analysis. Our model of fiscal citizenship contains four primary factors: *fiscal citizen voice*, *fiscal citizen contribution*, *fiscal citizen social exclusion*, and *fiscal citizen tax compliance*. *Voice* refers to taxpayers' opportunities to express concerns and participate in decision-making processes. The primary factor of *voice* has secondary factors of *voting* and *say*. *Contribution* refers to wanting to benefit society by paying taxes. The primary factor of *contribution* has secondary factors of *obligation* and *willingness*. *Social exclusion* refers to limiting who taxpayers believe should receive government welfare and benefits. *Tax compliance* refers to taxpayers' willingness to comply with tax laws. That our model contains tax compliance is noteworthy as it suggests that the other primary factors are associated with tax compliance and may be antecedents of tax compliance.

Next, in Part 2, to specifically address our research questions, we model paths from each of the *voice*, *contribution*, and *social exclusion* factors (and subfactors, where appropriate) to the *tax compliance* factor and conduct structural equations modeling on two subsamples, one with immigrants (n=492) and the other with non-immigrants (n=4,174). The immigrants in our sample hail from 92 countries. For the non-immigrant subsample, there were significant and negative direct paths from each of the *voice*, *contribution*, and *social exclusion* factors on tax compliance. However, for the immigrant subsample, there was only one significant direct path, also negative, which was from *social exclusion* to tax compliance. For non-immigrants, further analysis on the subfactors shows only one significant and positive path to compliance, from *obligation* to tax compliance. For immigrants, further analysis on the subfactors shows only one significant and positive path to compliance, from *voting* to tax compliance.

We contribute to the broader accounting literature by introducing the concept of fiscal citizenship and developing reliable and valid measures of dimensions of fiscal citizenship for use by accounting and other scholars. Studying immigrants' tax compliance attitudes extends accounting research on immigration which has hereto investigated professional identities (Annisette & Trivedi 2013; Annisette 2017; Hammond et al. 2009; Kamla 2023; Okafor &

³ In this exploratory research, we do not provide specific hypotheses as we develop and test theory. We could not be sure that tax compliance would be part of the ensuing fiscal citizenship model. As we included items about tax compliance in our initial survey of 61 items (discussed subsequently), we did not know *a priori* whether tax compliance was part of the fiscal citizenship construct.

Kalu 2023). We also extend socio-psychological research on tax compliance by developing a theoretical model of fiscal citizenship and using that model to identify specific antecedents of tax compliance. Our finding that *social exclusion* is an antecedent of tax compliance has not been shown before in tax compliance literature. As well, our finding that tax compliance is one of the key factors of fiscal citizenship provides evidence that tax compliance is an important driver of socio-political relations between individuals and the state. Finally, we extend socio-psychological research on tax compliance by specifically considering why immigrants are willing to be tax compliant.

Our paper is organized as follows. In the next section, we describe our model and scale development procedures. Following that, we conduct structural equations analysis and other statistical analysis to address our research questions. We conclude with a discussion of the implications of our findings.

2. Part I: Scale development of the fiscal citizenship construct

Citizenship is “usually defined as a form of membership in a political and geographic community” (Bloemraad et al., 2008, p. 154). The notion of citizenship refers to certain rights and obligations allocated to individuals under the authority of a nation-state. Citizenship includes political and social struggles of recognition and economic redistribution (Inis & Turner, 2002).

Conceptually, citizenship is disaggregated into four dimensions: rights, duties, political and other forms of participation in society, and a sense of belonging or identity (Bloemraad et al., 2008; Delanty, 1997; Van Bochove & Rusinovic, 2008). Citizenship as a right means that a citizen is a person who is the bearer of rights which are held against the state, and that the state is obligated to protect those rights. Citizenship as a duty means that a citizen is an obedient and responsible citizen. Citizenship as participation is an oppositional concept which emphasizes politically motivated action against the state and citizenship as belonging is an affective dimension referring to a sense of shared solidarity with others.

There are context-specific forms of citizenship, such as multicultural citizenship and ecological citizenship, in which these four dimensions are applied idiosyncratically (Inis & Turner, 2002). Fiscal citizenship is another context-specific form of citizenship referring to role of taxes in the social contract between the state and its citizens (Freund, 2019; Mehrotra, 2008, 2015; Zelenak, 2013). A tax is an obligation to contribute money to the state that is imposed on citizens by the state. Freund (2019, p. 126) defines fiscal citizenship as, “a social contract between the state and a class of actors whereby rights are exchanged for obligation in the form of tax liabilities.”

There are several reasons why taxation is important to understand in this social contract between citizens and the state. One is that tax is one of the most universal and persistent relationships individuals have with their government. Second, there is always the possibility of resistance between taxpayers and their government. The potential for conflict means that the citizen-state relation will always be somewhat precarious. Third, taxation is the source of financial resources for the state. As such, it differs from other sacrifices that the state demands from its citizens, such as compliance with traffic laws (Martin et al., 2009). Since social order depends on the state, and since the taxpayer’s decision to evade or resist taxation may challenge the existing social order, the notion of fiscal citizenship may help understand how this dynamic between citizens and the state can be balanced.

Existing research about fiscal citizenship is normative rather than empirical (e.g., Freund, 2019; Guano, 2010; Makovicky & Smith, 2020; Morgen & Erickson, 2017; Roitman, 2007; Sparrow, 2008). To mobilize this construct for empirical research, we undertake a scale development exercise. This process required two steps. First, we developed a survey that included a comprehensive list of items related to the four underlying dimensions of citizenship that is analogous to the tax context. Second, we administered our survey to a sample of immigrant and non-immigrant taxpayers and analyzed the results for reliability and construct validity. Each of these steps is described in turn.

2.1 Development and administration of the survey

We began by determining elements of each of the four dimensions of citizenship that could be applicable for a fiscal context. We consulted definitions of these four dimensions from established research (Bloemraad et al., 2008; Delanty, 1997; Van Bochove & Rusinovic, 2008). We then developed a comprehensive list of scale items that could be used to measure each of the four dimensions in a fiscal context. As no prior research exists pertaining to the measurement of fiscal citizenship, we created our own items. This adaptive approach has been followed in other empirical citizenship research (e.g., Wu et al., 2022) as well as other empirical tax research (e.g., Farrar et al., 2020). This process yielded a total of 95 items.

Next, we solicited the input from an expert panel of seven tax academics to ensure our initial list of items was comprehensive and clearly worded. Based on the input from the expert panel, we removed ambiguous items or items that were overlapping. We also reworded items that members of the panel deemed to be unclear. After several more iterations of reading the list of items for clarity, we were left with a final survey of 61 items (see Appendix A).

Our next step involved administering the survey to a taxpayer population. We employed a market research firm (Dynata) and requested a random sample of adults from three countries: Canada, Germany, and the United Kingdom.⁴ The adults had to be older than age 18 and there was no upper age limit. We received 4,670 complete responses (1,550 from Canada; 1,579 from Germany; 1,541 from the United Kingdom). Respondents were incentivized by the firm and were sent an invitation email asking them to complete an online survey about their opinions on taxes.⁵ Interested respondents would click on a link and were taken to the online survey. The survey consisted of demographic questions followed by the 61 items pertaining to fiscal citizenship. These items were presented in random order.

Demographic questions pertained to gender, age, whether respondents were born in Canada/Germany/UK, ethnicity, socioeconomic status, education, current employment status, political orientation, tax preparer, and knowledge that there was a tax authority in Canada/Germany/UK. For any respondent not born in Canada/Germany/UK (i.e., immigrants), we asked about their year of move to Canada/Germany/UK, country of birth, and reason for immigration. These demographic questions are contained in Appendix B.

⁴ Respondents in any of the three countries could choose to respond to the survey in English, French, or German. The survey was originally written in English and pairs of two academics apiece whose native languages were French and German each translated the survey into French and German, respectively.

⁵ The cost per participant was approximately \$6 Cdn. Some participants received a cash payment from Dynata whereas others are part of a loyalty program and receive points specific to this firm for completing a survey. These points can be redeemed for prizes.

We chose to sample from three countries to better assess the generalizability and robustness of our theoretical model. We chose to sample from these three countries for several reasons. One is that these countries have relatively high immigration rates. Canada, Germany, and the United Kingdom represent three of the top eight countries with overall totals of immigrants (DeDavis 2023; World Population Review, 2023). As well, we wanted to sample from countries with differences in uncertainty avoidance, a cultural dimension known to predict cross-national differences (Merkin, 2006). Individuals in countries with lower uncertainty avoidance are more inclined to participate in risk-taking behaviour than individuals in countries with higher uncertainty avoidance (Hofstede, 2001). We can naturally control for cross-national differences in risk-taking behaviour in a fiscal citizenship context by sampling from three countries with differences in uncertainty avoidance.⁶

Table 1 reports demographic characteristics for the sample. Overall, 50.1% of the sample was female, with an average age of 50.5 years. 10.5% of the sample consisted of immigrants, representing 92 countries of birth. Given differences in national currencies, we asked a scale-based question to gauge respondents' socioeconomic status. We also collected data about respondents' employment status and education. Using age and socioeconomic status as demographic indicators, our sample of taxpayers in each country appears reasonably representative of the broader population in each country.⁷

Table 1 – Demographic statistics of full sample

	Full sample	Canada	Germany	United Kingdom
Gender	Male = 2,260 Female = 2,301 Other = 9 Missing = 100 n=4,670	Male = 745 Female = 753 Other = 5 Missing = 47 n=1,550	Male = 754 Female = 771 Other = 1 Missing = 53 n=1,579	Male = 761 Female = 777 Other = 3 Missing = 0 n=1,541
Age in years	50.5 years (mean) 52.0 years (median)	50.8 years (mean) 52.0 years (median)	51.2 years (mean) 53.0 years (median)	49.5 years (mean) 49.0 years (median)
Immigrants ⁸	n=492	n=296 (19.1%)	n=89 (5.6%)	n=107 (6.9%)

⁶ The uncertainty avoidance scores for Canada, Germany, and the United Kingdom (on a scale of 0 to 100) are 48, 65, and 35, respectively. These scores are calculated at <https://www.hofstede-insights.com/country-comparison-tool?countries=canada%2Cgermany%2Cunited+kingdom>

⁷ The median ages in Canada, Germany, and the United Kingdom in our sample are 52 years, 53 years, and 49 years, respectively (see Table 1). The actual median ages in Canada, Germany, and the United Kingdom are 41.8 years, 47.8 years, and 40.6 years (<https://www.worlddata.info/average-age.php>). Our sample is slightly older than the population in these countries. Each of the three countries are ranked as 'high income' countries by the World Bank (<https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html>), which is the highest possible of four categories (the others being 'low income', 'lower middle income', and 'upper middle income'). Our mean scores of at least 6.0/10 for each country are consistent with a population with generally higher incomes.

⁸ For comparison, approximately 21% of Canada's population is immigrants (<https://www.statista.com/topics/2917/immigration-in-canada/#topicOverview>); approximately 18% of Germany's population is immigrants (<https://www.dw.com/en/germany-immigrants-made-up-over-18-of-2022-population/a-65383249>); and approximately 14% of the United Kingdom's population is immigrants (<https://migrationobservatory.ox.ac.uk/resources/briefings/immigrants-in-the-uk-an-overview/>).

Socio-economic status (mean) ⁹	6.2 / 10	6.1 / 10	6.4 / 10	6.0 / 10
Employment status	Full-time = 2,011 Part-time = 538 Self-employed = 203 Retired = 1,228 Unpaid worker = 165 Student = 128 Unemployed = 215 Other = 167 Missing = 15	Full-time = 654 Part-time = 139 Self-employed = 80 Retired = 430 Unpaid worker = 41 Student = 45 Unemployed = 88 Other = 66 Missing = 7	Full-time = 669 Part-time = 200 Self-employed = 61 Retired = 445 Unpaid worker = 61 Student = 49 Unemployed = 53 Other = 34 Missing = 7	Full-time = 688 Part-time = 199 Self-employed = 62 Retired = 353 Unpaid worker = 63 Student = 34 Unemployed = 74 Other = 67 Missing = 1
Education ¹⁰	level 1 = 46 level 2 = 71 level 3 = 646 level 4 = 1,050 level 5 = 755 level 6 = 349 level 7 = 1,081 level 8 = 576 level 9 = 83 missing = 13	level 1 = 16 level 2 = 38 level 3 = 38 level 4 = 347 level 5 = 268 level 6 = 192 level 7 = 458 level 8 = 154 level 9 = 34 missing = 5	level 1 = 16 level 2 = 22 level 3 = 555 level 4 = 314 level 5 = 184 level 6 = 31 level 7 = 214 level 8 = 217 level 9 = 18 missing = 8	level 1 = 14 level 2 = 11 level 3 = 53 level 4 = 389 level 5 = 303 level 6 = 126 level 7 = 409 level 8 = 205 level 9 = 31 missing = 0

2.2 Analysis of reliability and construct validity

Our statistical analysis required three steps. First, we used exploratory factor analysis to identify the unique dimensions of fiscal citizenship. Second, we determine the corresponding measures of fiscal citizenship and assess their validity and reliability. Third, we check whether the model of fiscal citizenship is similarly robust for immigrants versus non-immigrants (natives). In the following subsections, we describe each step.

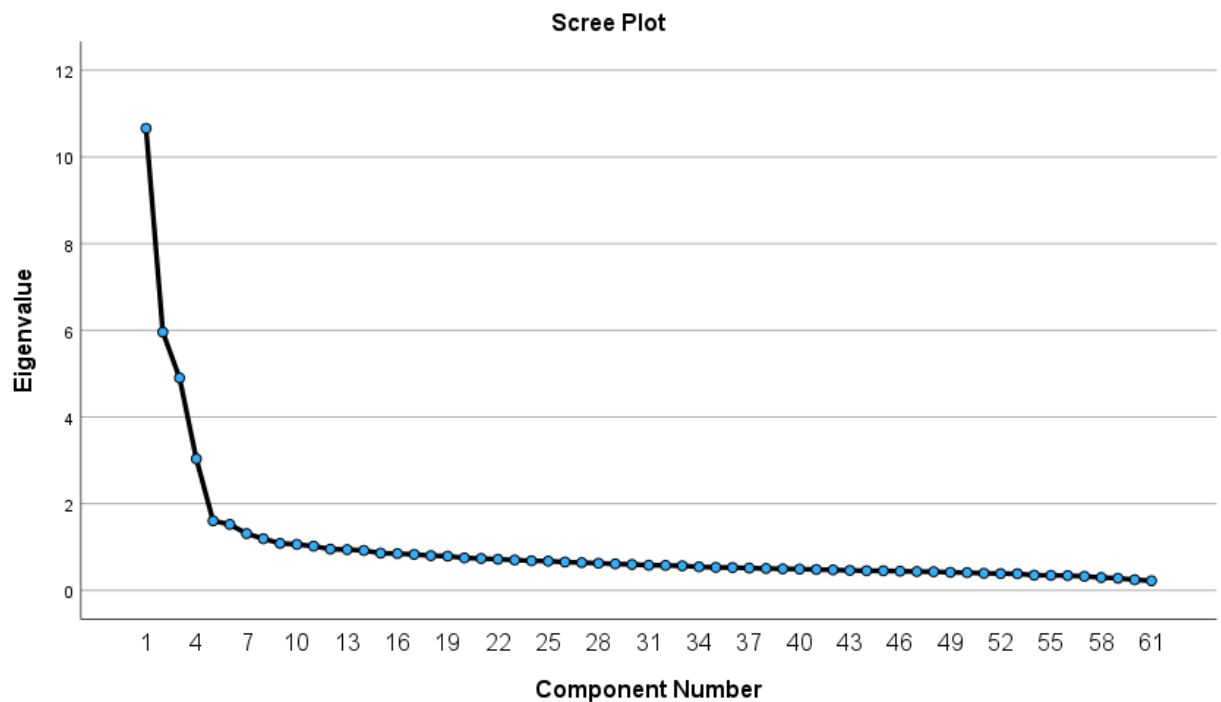
2.2.1 Identifying the dimensions of fiscal citizenship

We use exploratory factor analysis to identify the underlying dimensions of fiscal citizenship. Following Hair et al. (2013), we use a common factor approach to identify the number of dimensions comprising the fiscal citizenship construct. We identify four factors with eigenvalues greater than 1. We also visually examine a scree plot to verify that the line connecting the eigenvalues (on a y-axis) and the number of factors (on an x-axis) begins to flatten after the fourth factor, which supports a quadratic factor structure. The scree plot is presented below in Figure 1. These four dimensions are fiscal citizen *voice* (measured with 7 items), fiscal citizen *contribution* (measured with 6 items), fiscal citizen *social exclusion* (measured with 4 items), and fiscal citizen *tax compliance* (measured with 3 items). As a dimension with a minimum of three items is preferred for factor stability (Costello & Osborne, 2005), our factors meet this threshold.

⁹ Socio-economic status was measured on a 10-point scale with endpoints of 1 (low) and 10 (high).

¹⁰ Level 1 = early childhood or no education; level 2 = primary education; level 3 = lower secondary education (junior high school, middle school); level 4 = upper secondary education (high school, secondary school, Formation Professionnelle); level 5 = post-secondary non-tertiary (upgrading program, trade certificate, technical or professional training program); level 6 = short-cycle tertiary education (undergraduate diploma, certificate program, college diploma program); level 7 = bachelor degree or equivalent; level 8 = Master's degree or equivalent; level 9 = doctorate or equivalent

Figure 1 – Scree plot



We use oblique rotation (direct oblimin) to allow all factors to correlate. All items comprising the four dimensions have factor loadings of at least 0.35, which is the minimum factor loading required for statistical significance at the 0.05 level in a sample size of at least 250 (Hair et al. 2013). All but two of the items in the model have factor loadings of at least 0.60, which is strong (Osborne & Costello, 2005).

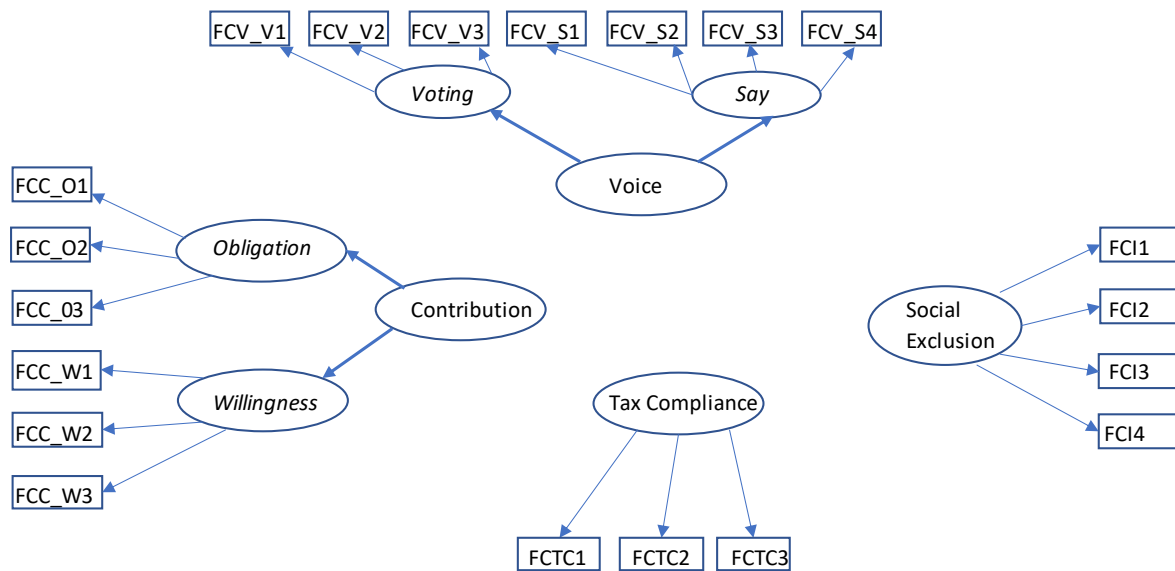
As suggested by Kline (2023), we examine goodness-of-fit of the model using the model chi-square, the root mean square error of approximation (RMSEA), and the Bentler comparative fit index (CFI), supplemented by the Tucker-Lewis Index (TLI).¹¹ If the model is a good fit to the data, the chi-square statistic should be significant ($p < 0.05$), the RMSEA should be at or below 0.06, and the CFI and TLI should be at least 0.90 (Kline, 2023). In our initial model, the chi-square statistic ($\chi^2 = 3026$, $df = 164$) is significant ($p < 0.01$), the RMSEA is 0.061, and the CFI and TLI are 0.926 and 0.905, respectively. Thus, the initial model appears to be well-fitting.

We also check if there are second-order factors by examining the items that load on each construct. For fiscal citizen *voice*, we observed that three items were specific to voting whereas four items were specific to direct communication. Thus, it is possible that there are two subdimensions of *voice* (*voting* and *say*; see James & John, 2021). For fiscal citizen *contribution*, we observed that three items pertained to whether someone should pay taxes and three items pertained to a desire to want to pay taxes (*obligation* and *willingness*). When we model fiscal citizenship using these pairs of subdimensions, the model fit is significantly improved using a chi-square difference test ($p < 0.01$). The overall model fit statistics are

¹¹ Per Hu & Bentler (1999), the TLI as a supplemental index is preferable for large sample sizes. Kline (2023) also recommends the SRMR (standardized root mean square residual). However, we used AMOS software which does not report the SRMR.

also slightly better, as the chi-square statistic ($\chi^2 = 2843$, $df = 160$) is significant ($p < 0.01$), the RMSEA is 0.060, and the CFI and TLI are 0.931 and 0.910, respectively. Thus, we conclude that fiscal citizenship is better represented as four primary dimensions, with two of these primary dimensions each containing pairs of secondary dimensions. Each secondary dimension has at least three items for factor stability (Costello & Osborne, 2005).¹² Our theoretical model is presented in Figure 1 and the items capturing each dimension are presented in Table 2.

Figure 2 – Measures and Dimensions of fiscal citizenship



¹² The Cronbach alpha of a two-item scale with the third item (about cryptocurrency) removed is 0.83. With the three-item scale, the Cronbach alpha is 0.84. We used a three-item scale for tax compliance for our analysis for better construct stability.

Table 2 – Factor loadings: primary and secondary factors of fiscal citizenship

Primary Factor	Secondary Factor	Item [statement # from survey] ¹³	Item label in Table 2 / Fig. 2	Factor loading			Cronbach alpha ¹⁴		
				Full sample	Non-natives	immigrants	Full sample	Non-natives	immigrants
Fiscal Citizen Voice	Voting	I should be able to vote on proposed changes to tax rates (e.g., an increase or decrease). [#14]	FCV_V1	0.81	0.66	0.80	0.76	0.76	0.70
		I should be able to vote on proposed changes to the tax administration system. [#15]	FCV_V2	0.76	0.77	0.71			
		I should be able to vote for the individuals who decide on tax rates. [#27]	FCV_V3	0.65	0.81	0.61			
	Say	The CRA should be responsive to my views about taxes. [#1]	FCV_S1	0.69	0.69	0.70	0.77	0.77	0.77
		I should have the right to protest paying taxes. [#11]	FCV_S2	0.61	0.61	0.63			
		I should have a say in the amount of tax the government spends on programs and services. [#12]	FCV_S3	0.80	0.80	0.80			
		I should have a say in what programs and services the government pays for (e.g., education, defense spending). [#13]	FCV_S4	0.78	0.79	0.74			
Fiscal Citizen Contribution	Obligation	I have a moral obligation to pay taxes. [#10]	FCC_O1	0.72	0.72	0.72	0.74	0.73	0.75
		I should pay taxes to support services provided by the	FCC_O2	0.76	0.76	0.76			

¹³ See Appendix.¹⁴ The Cronbach alpha for the primary factor Fiscal Citizenship Voice (7 items) is 0.86 (full sample), 0.86 (non-natives), and 0.84 (immigrants), respectively. The Cronbach alpha for the primary factor Fiscal Citizenship Contribution (6 items) is 0.86 (full sample), 0.86 (non-natives), and 0.88 (immigrants), respectively.

		government even if I don't personally use all of them. [#30]						
		I should pay taxes to enable future generations to have a sustainable future. [#42]	FCC_O3	0.74	0.74	0.76		
	Willingness	I am willing to pay my taxes if the government uses my tax dollars to help someone else. [#32]	FCC_W1	0.72	0.71	0.76	0.81	0.80
		I want to pay taxes to support services provided by my local government. [#35]	FCC_W2	0.83	0.83	0.85		
		I want to pay taxes to support services provided by the national government. [#36]	FCC_W3	0.84	0.83	0.84		
Fiscal Citizen Tax Compliance	n/a	Occasionally, I am tempted to exclude part of my income on my tax return. [#45]	FCTC1	0.89	0.89	0.87	0.84	0.85
		In the past, I have thought about overstating deductions on my tax return. [#47]	FCTC2	0.89	0.89	0.90		
		I like the idea of cryptocurrency because it is difficult to trace. [#48]	FCTC3	0.84	0.84	0.85		
Fiscal Citizen Social Exclusion	n/a	People must live in Canada for a minimum number of years to qualify for government welfare. [#34]	FCI1	0.73	0.74	0.63	0.82	0.82
		Only people who pay taxes should have access to government services. [#37]	FCI2	0.83	0.82	0.85		
		Only Canadian citizens should have access to government services. [#38]	FCI3	0.78	0.79	0.71		
		Only people who have paid taxes should be able to receive welfare. [#39]	FCI4	0.84	0.84	0.84		

2.2.2 Assessment of reliability and validity

To establish the robustness of our measures, we assess reliability, convergent validity, and discriminant validity. Each is discussed in turn.

Reliability refers to the internal consistency of the scale items and is most commonly assessed using the Cronbach's alpha coefficient. Cronbach's alpha coefficients of 0.7 are considered minimally acceptable and Cronbach's alpha coefficients of 0.8 are considered excellent (Nunnally, 1978). Table 2 shows all Cronbach's alpha coefficients for all scales. All measures and sub-scales for the overall sample exceed the minimum threshold for reliability (Nunnally, 1978), and all primary dimensions have Cronbach's alpha coefficients of greater than 0.8, which is excellent. Thus, we conclude that our scales and subscales are sufficiently reliable.

Convergent validity is whether similar constructs with dissimilar measures are nonetheless alike. To assess convergent validity, researchers should examine the correlations among the underlying items (Hair et al., 2013). If convergent validity is established, there should be a statistically significant correlation among the items for each primary and secondary dimension. As shown in Table 3, we checked the inter-item correlations for each primary and secondary dimension and find that all are positive and significant at the 0.01 level. Therefore, convergent validity is established for the items for both primary and secondary dimensions.

Table 3 – Pearson correlations for fiscal citizenship factors (full sample)

Note: all correlation coefficients are positive and significant at the 0.01 level.

Panel A: Fiscal Citizenship Voice							
Item	FCV_V1	FCV_V2	FCV_V3	FCV_S1	FCV_S2	FCV_S3	FCV_S4
Second-order factor	VOTING			SAY			
FCV_V1	1.00	0.59	0.46	0.43	0.35	0.58	0.67
FCV_V2		1.00	0.44	0.47	0.37	0.50	0.51
FCV_V3			1.00	0.35	0.32	0.43	0.42
FCV_S1				1.00	0.43	0.46	0.32
FCV_S2					1.00	0.46	0.59
FCV_S3						1.00	0.59
FCV_S4							1.00

Panel B: Fiscal Citizenship Contribution						
Item	FCC_O1	FCC_O2	FCC_O3	FCC_W1	FCC_W2	FCC_W3
Second-order factor	OBLIGATION			WILLINGNESS		
FCC_O1	1.00	0.45	0.45	0.42	0.51	0.49
FCC_O2		1.00	0.50	0.48	0.52	0.55
FCC_O3			1.00	0.45	0.51	0.51
FCC_W1				1.00	0.49	0.49
FCC_W2					1.00	0.74
FCC_W3						1.00

Panel C: Fiscal Citizenship Tax Compliance			
Item	FCTC1	FCTC2	FCTC3
FCTC1	1.00	0.72	0.60
FCTC2		1.00	0.62
FCTC3			1.00

Panel D: Fiscal Citizenship Social Exclusion				
Item	FCI1	FCI2	FCI3	FCI4
FCI1	1.00	0.41	0.50	0.47
FCI2		1.00	0.51	0.68
FCI3			1.00	0.49
FCI4				1.00

Discriminant validity is whether sub-constructs are distinct from each other despite being part of the same overall construct. To assess discriminant validity, researchers can use chi-square difference tests in which they constrain the covariance among each pair of dimensions to 1.0, and then compare the χ^2 statistic from the constrained model to the unconstrained model (Garver & Mentzer, 1999). If the constrained and unconstrained models differ significantly, discriminant validity is established. There are statistically significant differences – at the 0.05 level – for all chi-square differences for all pairs of primary and secondary dimensions (untabulated). Thus, discriminant validity is established for our measures of fiscal citizenship.

Overall, these results provide evidence to support the reliability and validity of the 20 items underlying the dimensions of fiscal citizenship. As such, they establish the robustness of the measures.

2.2.3 Comparison of fiscal citizenship model between immigrants and non-immigrants

Thus far, we have established a four-dimensional model of fiscal citizenship with reliable and valid measures. Prior to conducting further statistical analysis to address both research questions, we first want assurance that our theoretical model is robust for both immigrants and non-immigrants. To this end, we split the sample between immigrants (n=492) and non-immigrants (n=4,174) and compare the resulting model fit statistics with the full sample. Regardless of whether the split sample contains non-immigrants or immigrants, the model fit statistics continue to show well-fitting models, as there are significant chi-square statistics ($p < .01$), an RMSEA of 0.06, and CFI and TLI indices above 0.9. Thus, the initial fiscal citizenship model is robust when the sample is split for natives and immigrants.

Table 4 - Goodness-of-fit statistics

	Overall sample	Non-Immigrants	Immigrants
Sample size	n = 4,670	n = 4,178	n = 492
Chi-square	$\chi^2 = 2843$, df=160 $p < .01$	$\chi^2 = 2654$, df=160 $p < .01$	$\chi^2 = 454$, df=160 $p < .01$
RMSEA	0.060	0.061	0.061
CFI	0.931	0.929	0.924
TLI	0.910	0.906	0.901

As shown on Table 2, we also conduct reliability analysis for the internal consistency of the scales for both split samples. All of the Cronbach's alpha coefficients for the scales or sub-scales are at least 0.7, which indicates sufficient reliability (Nunnally, 1978).

For both split samples we assessed convergent validity by examining the correlations among the items for each primary and secondary dimension. All inter-item correlations for both samples were positive and significant at the 0.01 level (not tabulated). Therefore, convergent validity is established for the items for both primary and secondary dimensions across the native and immigrant samples. And, for both split samples we assessed discriminant validity using a chi-square difference test after constraining the covariance to 1.0 between each pair of primary and secondary dimensions. As before, we find significant chi-square difference tests (at the 0.05 level) for all pairs of dimensions for both natives and immigrants (not tabulated). Thus, discriminant validity is established for both native and immigrant subsamples.¹⁵

3. Part 2: Structural equations analysis

Recall that we set out to investigate why immigrants are willing to be tax compliant and how their willingness to be tax compliant may differ from non-immigrants. We use the concept of fiscal citizenship to address these issues and, in our scale development process in Part 1, discovered that tax compliance is part of the fiscal citizenship construct. Next, to address our research questions, we conduct structural equations analysis and model paths from each of the *voice*, *contribution*, and *social exclusion* factors to the *tax compliance* factor on two subsamples, one with immigrants (n=492) and the other with non-immigrants (n=4,174).

We reverse-coded the compliance items to make the interpretation of our results easier. The items were originally worded in such a way that higher scores indicated a greater willingness to be non-compliant. Reverse-scoring these items means that higher scores indicate a greater willingness to be compliant.

Our model of fiscal citizenship suggests that taxpayers are willing to be tax compliant because they have a voice in tax policy (*voice* dimension), because they value what their tax dollars can do for society (*contribution* dimension) and because they identify themselves as a collective of taxpayers with restrictions on who should benefit from government services (*social exclusion* dimension). Thus, we show structural paths from each of these three primary dimensions to the fourth primary dimension, *tax compliance*.

3.1 Path coefficients

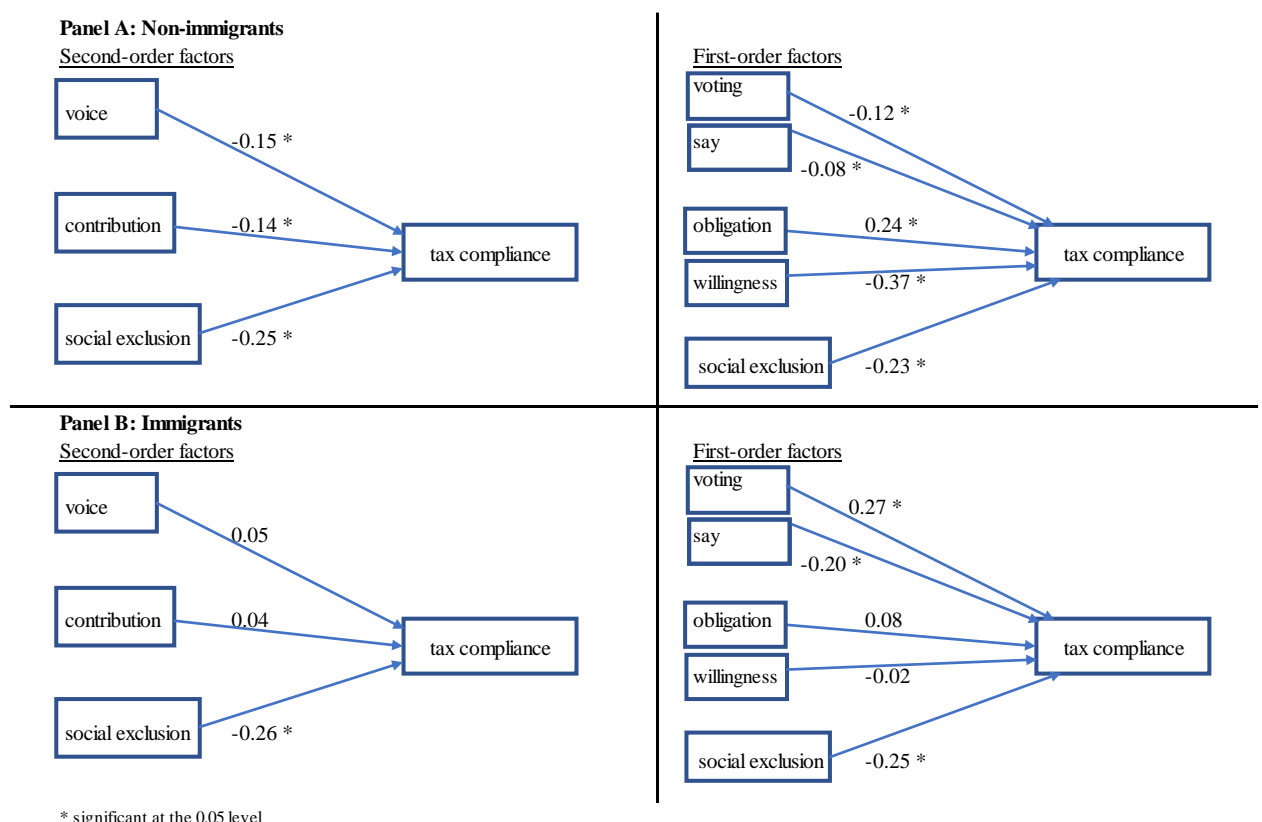
As shown in Figure 3, we report the path coefficients, and the significance of the path coefficient from each of the second-order factors *voice*, *contribution*, and *social exclusion* to *tax compliance* for both non-immigrants (Panel A) and immigrants (Panel B). We also report the path coefficients for the first-order factors comprising the two second order factors, as the first-order factors may have different influences on tax compliance. To streamline the reporting of the structural paths, in Figure 3 we show simplified constructs without the underlying items.

¹⁵ For additional robustness, we also verified that our initial model was consistent across each country by replicating the same analysis (untabulated). For each country subsample, all scales and subscales had minimum Cronbach alpha coefficients of 0.70 and all had minimum factor loadings in excess of 0.35. For the overall model using the German sample, the chi-square statistic was significant ($p < .01$), the RMSEA was 0.059, the CFI was 0.932 and the TLI was 0.911. For the Canadian sample, the chi-square statistic was significant ($p < .01$), the RMSEA was 0.063, the CFI was 0.921 and the TLI was 0.897. For the UK sample, the chi-square statistic was significant ($p < .01$), the RMSEA was 0.066, the CFI was 0.924 and the TLI was 0.901.

For non-immigrants, as shown in Figure 3, Panel A, the paths from each of *voice*, *contribution*, and *social exclusion* to *tax compliance* are negative and significant. The two first-order factors of *voice* (*voting* and *say*) have similar negative and significant paths. However, while the two first-order factors of *contribution* (*obligation* and *willingness*) have significant paths, *willingness* is a negative path whereas *obligation* is a positive path. Thus, for non-immigrants, there is an inverse relationship between their tax voice and tax compliance; that is, non-immigrants are likely to be compliant if they do not have a direct voice in tax policy. As well, there is an inverse relationship between *social exclusion* and *tax compliance*; that is, non-immigrants are more likely to be compliant if there are not restrictions on who qualifies for government benefits. The *willingness-tax compliance* path is negative, suggesting that non-immigrants do not want to pay income taxes but are nonetheless willing to be compliant. This negative path is complemented by the positive *obligation-tax compliance* path, which suggests that a sense of duty nevertheless leads to greater compliance.

For immigrants, as shown in Figure 3, Panel B, only the second-order factor *social exclusion* has a significant path to *tax compliance*. This path is negative, as it is for non-immigrants, suggesting that immigrants are willing to be compliant if there are not restrictions on who qualifies to receive government benefits. Although the second-order factor *voice* does not have a significant path to *compliance*, both first-order factors *voting* and *say* do, albeit with contrasting influences. The *voting-tax compliance* association is positive whereas the *say-compliance* association is negative, suggesting that immigrants would be more compliant only if they had a voice as a vote for tax policy changes. The second-order factors *obligation* and *willingness* are directionally similar compared with non-immigrants, but for immigrants these second-order factors are not significant.

Figure 3 – Paths to tax compliance from other fiscal citizenship dimensions



These findings address our first research question, which is, Why are immigrants willing to be tax compliant? These results suggest that immigrants are willing to be tax compliant if they are given a voice in the tax policy process in the form of a vote but not in a less formal way. These results also suggest that immigrants are willing to be tax compliant if there are not restrictions on who can receive government benefits.

These findings also address our second research question, which is, How does immigrants' willingness to be tax compliant compare to non-immigrants? There appear to be two key differences. One is that non-immigrants do not perceive the importance of being given a vote in the tax policy process whereas immigrants do. The other is that immigrants do not perceive the importance of contributing to society with their tax dollars whereas non-immigrants do.

3.2 Supplemental analysis

To provide additional insight into the non-significant direct paths between each of the first-order factors *obligation* and *willingness* on *tax compliance* for immigrants, we consider whether there may be a moderation effect. That is, there may be a significant indirect effect of these factors on tax compliance, as there is no significant direct effect. We investigate whether there may be country-specific differences in immigrants' country of origin that have shaped their tax morale. Immigrants arriving in a developed nation from another similarly developed nation are likely to have similar tax attitudes. However, immigrants arriving in a developed nation from a developing nation, where corruption may be prevalent, may differ in their tax attitudes. Empirical support for this suggestion is provided by DeBacker et al. (2015) and Løyland & Øvrum (2017), who found that immigrants from countries relatively high in corruption were significantly more likely to engage in tax evasion than immigrants from countries relatively low in corruption. Extending these findings to our setting, we suggest that the relative level of corruption in an immigrant's country of origin may moderate their *obligation* and *willingness* attitudes.

To investigate the possibility that the association between each of *obligation* and *willingness* on immigrants' tax compliance intentions are moderated by the level of corruption in their country of origin, we conduct a moderation analysis. We measure corruption using the Corruption Perception Index (CPI) for each country, similar to DeBacker et al. (2015).¹⁶ The Corruption Perception Index assigns a score of 0 to 100 to each country, where lower scores indicate higher corruption. We use 2009 CPI indices for our analysis as the immigrants in our sample have lived in their current country for a median time of 20 years and choosing an older CPI score better matches the extent of corruption when the immigrant left their country of origin vis-à-vis the extent of corruption today.¹⁷ Canada, Germany, and the United Kingdom have 2009 CPIs of 87, 80, and 77, respectively, indicating relatively low levels of corruption. We assign a CPI score to each country of origin of each immigrant in our sample.¹⁸

We then conduct a moderation analysis following the approach of Aguinis (2004). For the *obligation* and *willingness* independent variables, the *tax compliance* dependent variable, and the moderator variable (CPI score), we created standardized values to avoid multicollinearity. Next, we computed interaction variables for each independent variable and the moderator

¹⁶ Corruption scores are available at <https://www.transparency.org/en/cpi/2022>

¹⁷ In general, the corruption scores have remained stable in 2009 through 2022.

¹⁸ 7 immigrant respondents did not provide a country of origin. Our analysis is conducted on the 485 immigrants who provided their country of origin, which represent 92 countries.

variable. Finally, we did a path analysis for each standardized independent variable and its respective interaction variable on the dependent variable. The interaction term of the obligation x CPI score on tax compliance ($p = 0.90$) and the interaction term of the willingness x CPI score variable on tax compliance ($p = 0.15$) are both non-significant. Thus, we conclude that immigrants' attitudes towards paying taxes to contribute to society are not significantly influenced by the corruption of their country of origin. This finding differs from the results of DeBacker et al. (2015) and Løyland & Øvrum (2017), as we do not find that immigrants from countries higher in corruption (versus lower in corruption) are less willing to be compliant because of a sense of obligation or a lack of willingness to pay taxes.

4. Discussion and Conclusion

We conducted an exploratory investigation to understand why immigrants are willing to be tax compliant and how their willingness to be tax compliant may differ from non-immigrants. Using a scale development process, we first developed a model of fiscal citizenship. This model includes *tax compliance* as a primary dimension, along with other primary dimensions of *voice*, *contribution*, and *social exclusion*. *Voice* has secondary dimensions of *voting* and *say*, while *contribution* has secondary dimensions of *obligation* and *willingness*. We also develop reliable and valid measures of each primary and secondary dimension. We corroborated the model fit for subsamples of non-immigrants and immigrants.

To address our research questions, for each subsample, we investigated the paths between the three possible antecedents of tax compliance that emerged from our fiscal citizenship model (*voice*, *contribution*, and *social exclusion*). We found that for the sample of non-immigrants, there were negative and significant direct associations for each of *voice*, *contribution*, and *social exclusion* on *tax compliance*. Non-immigrants with an opportunity to provide input on tax policy and tax administration issues will not increase their tax compliance and non-immigrants will not increase their tax compliance if there are restrictions on who is eligible to receive government benefits. Non-immigrants will only increase their tax compliance because of their sense of obligation but not because of a desire to want to pay taxes.

This latter finding jives with ethics research showing that moral obligation is influential at influencing tax compliance (Bobek & Hatfield 2003). It is unsurprising that individuals dislike paying taxes, as there is psychological research showing that individuals have a strong aversion to taxes (see Berger et al. 2023 for a review). But it is surprising that having a voice does not increase tax compliance, as there is research suggesting that having a voice in how taxes are distributed or used can increase tax compliance (Casal et al. 2016; Lamberton et al. 2018). Our measure of voice is broader as it relates to both voting for tax policy changes as well as having a say in how taxes are used, and it may be that having a voice regarding a specific use of tax dollars is necessary to significantly impact tax compliance.

The results are somewhat different for immigrants. Like non-immigrants, immigrants will not increase their tax compliance if there are restrictions on who is eligible to receive government benefits. However, unlike non-immigrants, immigrants will increase their tax compliance if they have the opportunity to vote on tax policy and tax administration issues. And, unlike non-immigrants, immigrants' tax compliance is not influenced by either obligation or willingness. Immigrants seem to have different attitudes than non-immigrants regarding their payment of taxes as dutiful or voluntary contributions to society. Further research is required to probe this finding further. Collectively, these findings suggest the importance of

democratic participation in the tax policy process to increase compliance intentions of immigrants.

We contribute to the accounting literature by empirically substantiating the concept of fiscal citizenship through a scale development process and showing how tax compliance is influenced by other dimensions of fiscal citizenship. Our finding that several antecedents of tax compliance intentions are different for immigrants versus non-immigrants extends accounting research on immigration, which has considered only how immigrant accountants adapt to new professional settings (Annisette & Trivedi 2013; Annisette 2017; Hammond et al. 2009; Kamla 2023; Okafor & Kalu 2023), as well as tax compliance research, which has not yet examined why immigrants may be tax compliant and how their tax compliance attitudes may differ from non-immigrants. Our finding that tax compliance is one of the key factors of fiscal citizenship provides evidence that tax compliance is an important driver of socio-political relations between individuals and the state. We also extend socio-psychological research on tax compliance by identifying *social exclusion* as an antecedent of tax compliance.

Our empirical findings differ from DeBacker et al. (2015) and Løyland & Øvrum (2007) because we do not find that immigrants from high-corruption countries bring with them negative tax compliance attitudes relative to immigrants from low-corruption countries. We do not find that corruption moderates immigrants' attitudes regarding compliance out of moral obligation or intrinsic willingness to want to pay.

We noted at the outset that the citizenship construct is disaggregated into four dimensions: rights, duties, political and other forms of participation in society, and a sense of belonging or identity (Bloemraad et al., 2008; Delanty, 1997; Van Bochove & Rusinovic, 2008). We also noted that there are context-specific forms of citizenship. Our research provides evidence that the construct of fiscal citizenship is context-specific and overlaps with the broader citizenship construct but is not an exact reflection. Fiscal citizenship contains the notion of rights (the *tax compliance* dimension), duties (the *obligation* subdimension of the *contribution* dimension), political and other forms of participation in society (with the *willingness* subdimension of the *contribution* dimension as well as the *voice* dimension with its *voting* and *say* subdimensions); and a sense of identity (i.e., fiscal citizen *social exclusion*). A final contribution is that our research provides theoretical clarity to the normative literature on citizenship by confirming the context-specific nature of fiscal citizenship.

If the general public perceives that immigrants bring with them negative tax compliance attitudes – a perception somewhat supported by our research because we do not find that moral obligation positively influences immigrants' tax compliance – a tax authority may need to consider how best to change this perception. In general, there is political psychology research showing the prevalence of anti-immigrant attitudes in developed countries (e.g., Ceobanu & Escandell 2010; Harell et al. 2017). Anti-immigrant attitudes shape national policies (Tripathi 2022) and lead to more localized problems, such as schoolyard bullying (Bracco et al. 2022). More widespread public knowledge about immigrants' willingness to be tax compliant with formal democratic participation in tax policy could potentially temper anti-immigrant sentiment.

As with all behavioural research, our study is not without limitations. This study was tested using taxpayers from Canada, Germany, and the United Kingdom. We encourage future research using taxpayers from other countries. To the extent that taxpayers in other countries differ in meaningful ways from taxpayers in these three countries, we can extend

our understanding of our theoretical model. Second, participants in our study provided compliance intentions rather than actual compliance behavior. While it is important to distinguish intentions from behavior, there is strong empirical support (Sheeran 2002) for psychological models holding that an individual's intention is the strongest predictor of an individual behavior.

We encourage extensions of this research, such as by investigating how tax authorities could use taxpayers' voice to improve tax compliance or how publicizing the qualification process to obtain government benefits may improve tax compliance. We also encourage immigrant-specific tax compliance research, as our results suggest that immigrants' tax compliance intentions could vary according to their country of origin. For instance, future research could investigate how possible retribution for tax offenses impacts immigrants versus natives, and how the likelihood of an audit impacts immigrants versus non-immigrants.

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Appendix A – Fiscal Citizenship Survey Items

Note: the following statements were shown to Canadian respondents. Respondents from Germany and the United Kingdom saw identical statements except that country-specific language about the name of the country or the country's tax authority was changed. In the statements below, "CRA" refers to "Canada Revenue Agency".

Respondents were asked to rate their level of agreement with the following statements by clicking on the appropriate response, where 1=strongly disagree and 7=strongly agree. Items in italics are used in the final analysis, with their respective item indicators.

1. *The CRA should be responsive to my views about taxes. [FCV_S1]*
2. The government should support me financially even when I can't pay taxes.
3. The CRA should treat me as a customer.
4. The CRA should treat me the same as any other taxpayer.
5. It is reasonable for the CRA to ask financial institutions (e.g., banks, insurance, investment) for my personal information.
6. The CRA should be allowed to share my tax information with other government agencies.
7. The CRA does a good job at catching tax offenders.
8. The tax authority should be very strict with all tax offenders.
9. High-income tax cheaters should be punished more harshly than low-income tax cheaters.
10. *I have a moral obligation to pay taxes. [FCC_O1]*
11. *I should have the right to protest paying taxes. [FCV_S2]*
12. *I should have a say in the amount of tax the government spends on programs and services. [FCV_S3]*
13. *I should have a say in what programs and services the government pays for (e.g., education, defense spending). [FCV_S4]*
14. *I should be able to vote on proposed changes to tax rates (e.g., an increase or decrease). [FCV_V1]*
15. *I should be able to vote on proposed changes to the tax administration system. [FCV_V2]*
16. My elected representative should participate in hiring decisions at the CRA.
17. The Commissioner (head) of the CRA should be an elected position.
18. Tax administrators should be representative of taxpayers reflecting the balance of gender and ethnicity in society.
19. CRA should be publicly accountable for their official decisions.
20. There should be a Taxpayer Bill of Rights, including expected standards of CRA employees' behaviour, to protect us from the CRA.
21. The CRA should face consequences of it makes a mistake processing your tax return.
22. CRA tax auditors should be rewarded for catching tax cheaters.
23. The CRA should justify how it spends its money to administer the tax system.
24. The CRA should be held to account by an independent oversight committee (watchdog).
25. Even if I don't pay taxes, I should be given a say in how the government spends tax dollars.
26. Non-citizens of Canada residing in Canada should be given a say in how Canadian taxpayers are taxed.
27. *I should be able to vote for the individuals who decide on tax rates. [FCV_V3]*
28. My elected representative should be able to vote for the individuals who decide on tax rates.
29. All taxpayers should receive equal access to government services regardless of their immigration status.

30. *I should pay taxes to support services provided by the government even if I don't personally use all of them. [FCC_O2]*
31. Only people who fall below the poverty line should receive government welfare.
32. *I am willing to pay my taxes if the government uses my tax dollars to help someone else. [FCC_W1]*
33. People should have the same access to government services regardless of how much they pay in taxes.
34. *People must live in Canada for a minimum number of years to qualify for government welfare. [FCI1]*
35. *I want to pay taxes to support services provided by my local government. [FCC_W2]*
36. *I want to pay taxes to support services provided by the national government. [FCC_W3]*
37. *Only people who pay taxes should have access to government services. [FCI2]*
38. *Only Canadian citizens should have access to government services. [FCI3]*
39. New immigrants to Canada should have the same access to government services as everyone else.
40. *Only people who have paid taxes should be able to receive welfare. [FCI4]*
41. Taxes on fossil fuels, such as gas, oil and coal, should be increased in Canada to reduce climate change.
42. *I should pay taxes to enable future generations to have a sustainable future. [FCC_O3]*
43. People who pay more in taxes should have priority access to government services.
44. I should receive government services and benefits because I pay taxes.
45. *Occasionally, I am tempted to exclude part of my income on my tax return. [FCTC1]*
46. I am willing to pay cash for goods and services to get a lower price.
47. *In the past, I have thought about overstating deductions on my tax return. [FCTC2]*
48. *I like the idea of cryptocurrency because it is difficult to trace. [FCTC3]*
49. I try to reduce my taxes in any way possible unless it is obviously illegal.
50. I enjoy disagreeing with the CRA.
51. I would view a tax audit as a battle with the CRA.
52. I am willing to report known or suspected tax fraud to the tax authority.
53. I often debate tax issues with my friends and family.
54. I support political parties which promise to reduce my tax rates.
55. When talking about Canadian taxpayers I tend to say 'we' instead of 'they'.
56. I often think of myself as a taxpayer.
57. I am proud that I'm a taxpayer.
58. If someone said something bad about Canadian taxpayers I feel as if they said something bad about me.
59. If someone said something bad about Canada I feel as if they said something bad about me.
60. I feel angry whenever there is a change in tax laws that I don't like.
61. If the CRA selects my tax return for an audit, it is probably because I made a mistake.

Appendix B – Demographic questions in survey

Note: the following questions were asked of Canadian respondents. Respondents from Germany and the United Kingdom were asked identical questions except that the name of the country and acronym of tax authority were changed.

- 1) Do you identify as
- man
 - woman
 - in another way
 - prefer not to say

- 2) In which year were you born?

- 3a) Were you born in Canada? Yes No

[note: anyone answering 'yes' responded to questions 3b through 3d]

- 3b) In which year did you move to Canada?

- 3c) In which country were you born?

1 Afghanistan	66 Ghana	133 Panama
2 Albania	67 Gibraltar	134 Paraguay
3 Algeria	68 Greece	135 Peru
4 Andorra	69 Grenada	136 Philippines
5 Angola	70 Guatemala	137 Poland
6 Antigua and Barbuda	71 Guinea	138 Portugal
7 Argentina	72 Guinea-Bissau	139 Qatar
8 Armenia	73 Guyana	140 Reunion
9 Austria	74 Haiti	141 Romania
10 Azerbaijan	75 Holy See	142 Russia
11 Bahrain	76 Honduras	143 Rwanda
12 Bangladesh	77 Hong Kong	144 Saint Helena
13 Barbados	78 Hungary	145 Saint Kitts and Nevis
14 Belarus	79 Iceland	146 Saint Lucia
15 Belgium	80 India	147 Saint Vincent and the Grenadines
16 Belize	81 Indonesia	148 San Marino
17 Benin	82 Iran	149 Sao Tome and Principe
18 Bhutan	83 Iraq	150 Saudi Arabia
19 Bolivia	84 Ireland	151 Senegal
20 Bosnia and Herzegovina	86 Israel	152 Serbia
21 Botswana	87 Italy	153 Seychelles
22 Brazil	88 Jamaica	154 Sierra Leon
23 Brunei	89 Japan	155 Singapore
24 Bulgaria	90 Jordan	156 Slovakia

25 Burkina Faso	91 Kazakhstan	157 Slovenia
26 Barundi	92 Kenya	158 Somalia
27 Cabo Verde	93 Kuwait	159 South Africa
28 Cambodia	94 Kyrgyzstan	160 South Korea
29 Cameroon	95 Laos	161 South Sudan
30 Canada	96 Latvia	162 Spain
31 Central African Republic	97 Lebanon	163 Sri Lanka
32 Chad	98 Lesotho	164 State of Palestine
33 Channel Islands	99 Liberia	165 Sudan
34 Chile	100 Libya	166 Suriname
35 China	101 Liechtenstein	167 Sweden
36 Colombia	102 Lithuania	168 Switzerland
37 Comoros	103 Luxembourg	169 Syria
38 Congo	104 Macao	170 Taiwan
39 Costa Rica	105 Madagascar	171 Tajikistan
40 Cote d'Ivoire	106 Malawi	172 Tanzania
41 Croatia	107 Malaysia	173 Thailand
42 Cuba	108 Maldives	174 The Bahamas
43 Cyprus	109 Mali	175 Timor-Leste
44 Czech Republic	110 Malta	176 Togo
45 Denmark	111 Mauritania	177 Trinidad and Tobago
46 Djibouti	112 Mauritius	178 Tunisia
47 Dominica	113 Mayotte	179 Turkey
48 Dominican Republic	114 Mexico	180 Turkmenistan
49 DR Congo	115 Moldova	181 Uganda
50 Ecuador	116 Monaco	182 Ukraine
51 Egypt	117 Mongolia	183 United Arab Emirates
52 El Salvador	118 Montenegro	184 United Kingdom
53 Equatorial Guinea	119 Morocco	185 United States
54 Eritrea	120 Mozambique	186 Uruguay
55 Estonia	121 Myanmar	187 Uzbekistan
56 Eswatini	122 Namibia	188 Venezuela
57 Ethiopia	123 Nepal	189 Vietnam
58 Faeroe Islands	124 Netherlands	190 Western Sahara
59 Finland	125 Nicaragua	191 Yemin
60 France	126 Niger	192 Zambia
61 French Guiana	127 Nigeria	193 Zimbabwe
62 Gabon	128 North Korea	

63 Gambia	129 North Macedonia	
64 Georgia	131 Oman	
65 Germany	132 Pakistan	

3d) Why did you migrate to Canada? Please select all that apply.

- Economic reasons
- Social reasons
- Political reasons
- Environmental reasons
- Other (please describe)
- Prefer not to say
- Because my parents migrated

4) What racial or ethnic group describes you best?

- Caucasian (white)
- Aboriginal/First Nations
- Latin American (Mexican, Chilean, Costa Rican, etc.)
- Arabic (Middle East, North Africa)
- Black (African, African-American etc)
- South Asian (Indian, Bangladeshi, Pakistani, Sri Lankan, etc.)
- Southeast Asian (Vietnamese, Cambodian, Malaysian, etc.)
- West Asian (Iranian, Afghan, etc)
- Pacific Islander
- East Asian (Chinese, Korean, Japanese)
- Other
- Prefer not to say

5) What is your socio-economic status? (1=low; 10=high)

6) What is the highest educational level that you have attained?

- early childhood/no education
- primary education
- lower secondary education (Junior High, Middle School)
- upper secondary education (High School, Secondary School, Technical High School, Formation Professionnelle)
- post-secondary non-tertiary education (Upgrading Program, Trade Certificate, technical or professional training program)
- short-cycle tertiary education (undergraduate diploma, certificate program, college diploma program)
- Bachelor or equivalent
- Masters or equivalent
- Doctorate or equivalent

7) What is your current employment status?

- Full-time employee
- Part-time employee
- self-employed
- Retired
- Unpaid family worker

- Student
- Unemployed
- Economically inactive
- Other

8) In political matters people talk of the "left" and the "right". How would you place your views on this scale, with values closer to 1 indicating left and values closer to 9 indicating right?

9) Who has prepared your tax return in the last 10 years? Check all that apply.

- Me
- Paid tax preparer
- Friends or family
- Tax clinic
- I don't prepare an individual return
- Other
- Don't know
- Prefer not to say

10) Have you heard of the CRA? Yes No

The Fiscal Citizenship Project

Taxation is necessary to the proper functioning of the modern welfare state and payment of taxes can be thought of as a unifying act that brings us together to further our collective goals. Taxes touch our lives in many ways and our willingness to contribute through paying taxes, understood in our project as “fiscal citizenship”, is complicated. Our comparative project addresses this important issue in a study that seeks to deepen our understanding of fiscal citizenship drawing on a variety of research methods and disciplinary traditions.

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