Tax compliance across sociodemographic categories: Meta-analyses of survey studies in 111 countries

Eva Hofmann [a,b,c,*], Martin Voracek [b], Christine Bock [b], Erich Kirchler [b]

[a] Coventry University, UK
[b] University of Vienna, Austria
[c] WU, Vienna University of Economics and Business, Austria

ARTICLE INFO

ABSTRACT

Tax compliance varies across sociodemographic categories. However, research on the relationships between compliance and age, sex, education as well as income level shows inconsistent results, both regarding the direction of the relationship and its size. The current meta-analyses target to merge findings in survey studies on age, sex, education, and income and estimate the strength of the impact on compliance by taking into account geographical regions. In four meta-analyses, comprising 459 samples ($N = 614,286$) from 111 countries published between 1958 and 2012, average estimated effect sizes were small, ranging from $r = 0.12$ for the relationship between compliance and age, $r = 0.06$ for sex, $r = -0.02$ for education to $r = -0.04$ for income. These effects are more pronounced in Western countries. It thus appears sociodemographic characteristics have little impact on compliance, but nevertheless should be controlled for in tax research.

© 2017 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

Empirical studies suggest tax compliance to vary across sociodemographic categories (Ahmed & Braithwaite, 2004; Bobek, Roberts, & Sweeney, 2007; Kastlunger, Dressler, Kirchler, Mittone, & Voracek, 2010; Wenzel, 2007). While significant differences are confirmed between different occupational groups and their opportunities to evade, research on the relations between compliance and age, sex, education as well as income has yielded less clear results. While some studies (Ahmed & Braithwaite, 2004; Bobek et al., 2007; Kastlunger et al., 2010; Wenzel, 2007) show significant relations with compliance, others (Ashby, Webley, & Haslam, 2009; Braithwaite & Ahmed, 2005; Grasmick & Bursik, 1990; Muehlbacher, Kirchler, & Schwarzenberger, 2011) show no effect. As the impact of sociodemographic categories on tax compliance is not clear, some researchers include them in their studies (e.g., Ashby et al., 2009) and some neglect them (e.g., Muehlbacher & Kirchler, 2009). But sociodemograhics might confound with more complex variable connections and might even interact with some variables. Therefore, if there exists an impact of sociodemographics on tax compliance, it is essential to integrate them in research on tax compliance. The present study will give a clear picture of the impact of sociodemographics so that recommendations for the inclusion of them in tax compliance research can be made.

In the present paper we present four meta-analyses of survey studies which take into consideration the relationships between tax compliance and age, sex, education as well as income. As tax compliance has been found to differ across cultures

---

and regions, we control for the geographical region (Western Europe, Eastern Europe & Central Asia, South Asia, East Asia & Pacific, Oceania, Middle East & North Africa, Sub-Saharan Africa, North America, Latin America & Caribbean).

2. Tax compliance in the light of sociodemographic characteristics

2.1. Age differences

The socialization of older generations differs from younger generations: social values, attitudes towards the state and towards taxes may change from one age cohort to another. Research on different age cohorts shows that socialization can take on dissimilar routes (Riley, Foner, & Warner, 1988). While based on shared life histories in one cohort, personal, social and societal norms might evolve which stimulate tax compliance, in other cohorts norms might evolve to undermine tax honesty. Hence, higher age might be related to more as well as to less tax compliance. With age the need for public goods such as social security and health care increases. Older citizens might, thus, treasure the benefits of taxes more than younger ones and be more compliant. Also, older persons might be in a better financial situation than younger ones. It is easier for them to afford being tax compliant due to fewer budget constraints. Having built up a comfortable home, having raised children, and earning more income than younger generations, gives them financial freedom which young citizens may lack (Kirchler, 2007). With increasing age taxpayers also accumulate experiences with their business, with taxes and tax authorities (Nordblom & Žamac, 2012). With increasing age, taxpayers acquire knowledge about the tax law which is associated with improved tax compliance (Eriksen & Fallan, 1996).

2.2. Sex differences

In general, women are found to behave more morally than men do and be less likely to break the law (Betz, O'Connell, & Shepard, 1989; White, 1999). Based on that finding, personal, social and societal norms of women should focus stronger on tax compliance than men's norms. Women are also assumed to engage stronger in social cooperation. This is supported by results from ultimatum games in which women offer higher shares of their endowment to anonymous interaction partners than men do (Eckel & Grossman, 2001). The hypothesis that women are more tax compliant than men bases also on findings that women tend to be generally less risk seeking in financial decisions (Barber & Odean, 2001; Croson & Gneezy, 2009). Women may perceive sanctions for misbehavior as more severe and threatening than men. Thus, female taxpayers should be more tax compliant than males.

2.3. Education differences

Empirical results are unclear. Higher education is related to better knowledge of tax law. Therefore, higher educated people understand the law and filing rules, while low educated people with little understanding are likely to make mistakes when filing their taxes. Higher education is also associated with better access to information on schemes to avoid taxes. Therefore, higher education may be related to lower evasion but higher avoidance tendencies. Low financial literacy in general and little knowledge on taxes in particular, thus, limited understanding of one's duties and opportunities may breed distrust and consequently non-compliance. A low level of education may be related to low tax compliance (Bobek et al., 2007). However, it was also found that high tax complexity, thus, limited understanding of one's tax duties and high insecurity, fuel compliance (Kirchler, 2007).

2.4. Income effects

Classical tax theory (Allingham & Sandmo, 1972) is inconclusive in regard to income and its effect on tax compliance. Tax payments reduce the amount of available income and therefore specifically hurt low-income earners which might result in risk seeking behavior. Consequentially, low income categories are hypothesized to be less tax compliant than high income categories. On the other hand, high income earners are assumed to be more likely to evade taxes than low income earners. Chung and Trivedi (2003) assume that high income is related to low compliance. High income earners pay an absolutely and relatively higher amount of taxes than low income earners and risk higher fines in cases of detected evasion which should yield to risk aversion (Ahmed & Braithwaite, 2004; Chung & Trivedi, 2003). The inconsistent findings might also derive from the fact that in many countries taxation is progressive: the higher the income the higher the applied tax rate. From this view, it is probably not high-income earners in general who evade more taxes but rather taxpayers at the verge between two income brackets, who avoid paying their fair share to stay in the lower-income bracket and pay relatively lesser taxes (Slemrod, 1985).

3. Factors fostering or diminishing the predictability of tax compliance through sociodemographic characteristics

Specifics of data collection can alter the relation between tax compliance and sociodemographic characteristics differing over regions.