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An empirical analysis of percentage tax designation to the catholic church and other social entities in Spain

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Abstract

Since 2007, the Spanish State's contribution to funding the Catholic Church comes from what is known as the 'tax allocation' (*asignación tributaria*). It is a pure system of percentage tax designation consisting of 0.7% of the tax liability of taxpayers who decide to tick the relevant box on their personal income tax form. From this system, taxpayers may also choose instead, or additionally, to allocate the same percentage to other activities considered of social interest or may choose not to tick either box. In this last case, they waive the option of contributing part of their tax liability directly to religious or social entities. Based on a database published by the Spanish Tax Agency, and applying ordinary least squares techniques, the present paper obtains the profile of taxpayers who opt for each of these alternatives. The results suggest the existence of two clearly delimited and opposing profiles of taxpayers: On the one hand, those who do not tick any tax allocation box or tick both; on the other hand, those who tick only one box, either the one for the

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Catholic Church or the one for other purposes of social interest.

KEYWORDS
Catholic Church, funding, personal income tax, social purposes, tax allocation

JEL CLASSIFICATION
H31, H53

1 | INTRODUCTION

Since 2007, Spain applies a pure system of percentage tax designation (also called percentage philanthropy or percentage legislation) to implement the State's contribution to the financing of the Catholic Church. Under this system, which in Spain is called *asignación tributaria* (tax allocation), each taxpayer decides whether or not to check a box on their personal income tax (*Impuesto sobre la Renta de las Personas Físicas*, IRPF) return to indicate their desire to directly contribute to funding the Catholic Church, with a certain percentage of their tax liability. Spain thus joins the group of countries that use this mechanism to finance religious confessions or other activities with social purposes, such as Hungary, Italy, Poland, Portugal, Romania, Slovakia or Lithuania, and unlike other countries that opt for church taxes, such as Germany, Austria or Sweden.

Prior to the implementation of the current system, the path was long and complex. Article 2 of the Agreement on financial matters of 3 January 1979 between the Spanish State and the Holy See foresaw that the tax allocation system would be implemented 3 years after its signature and would replace the grant system then in force.[1] Nevertheless, until 1986, funding for the Catholic Church continued to come from the General State Budget. The financial year 1987 was the first one when taxpayers had the option of ticking a box on their IRPF return to indicate their desire to contribute directly to funding the Catholic Church, with a percentage of 0.5239% of their tax liability. Such tax liability results from applying the tax rates to the taxable income and before the subtraction, if applicable, of any tax credits to arrive at the tax payable. Thus, a taxpayer may

[1] Article 2 of the Agreement reads as follows:

'1. The State promises to collaborate with the Catholic Church for it to obtain its appropriate economic support, absolutely respecting the principle of religious freedom.

2. Three full fiscal years after this Agreement is signed, the State may assign to the Catholic Church a percentage of the yield from income tax, wealth tax, or other personal taxes using the most suitable technical method. For this purpose, each taxpayer must, on the respective tax form, expressly declare their intention as to the destination of the affected portion. In the absence of such a declaration, the corresponding amount shall be assigned to other purposes.

3. This system shall substitute the grant referred to in the next paragraph, such that it will provide similar funding to the Catholic Church.

4. Until the new system comes into force, the General State Budget shall assign a suitable grant to the Catholic Church in a single payment to be updated yearly.

During the three-year replacement period, the budgetary grant shall be reduced by an amount equal to the tax allocation received by the Catholic Church.

5. The Catholic Church declares its intention to acquire by itself sufficient resources to meet its needs. Once this has been achieved, both parties shall agree to replace the systems of financial collaboration described in the above paragraphs, in other areas and by other means of economic collaboration between the Catholic Church and the State'.

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have a positive tax liability, but a null or negative tax payable. Within this system, alternatively, taxpayers had the option of allocating the same percentage of the tax liability to other activities considered of social interest (care services, social services, civic activities, education, culture, science, sports, healthcare, development aid, the environment, support for the economy, research and the voluntary sector), by ticking a different box; although they could not decide the specific social destination of the allocation. If the taxpayer left both boxes blank, the same 0.5239% of their tax liability would be allocated to these social purposes.

The 1999 IRPF return was the first to let taxpayers tick both boxes simultaneously, allocating the same percentage, 0.5239%, to both the Catholic Church and other social purposes (0.5239 + 0.5239). If a taxpayer does not tick any box, no part of their IRPF tax liability is allocated to any specific purpose.

Until 2006, the Catholic Church's revenues from the tax allocation were supplemented with a grant from the State to reach the total amount provided for in the General State Budget, such that its total funding did not depend on how many individuals were willing to contribute through the tax allocation. Since 2007, State funding of the Catholic Church came exclusively through tax allocation, which was raised to 0.7% of tax liability,[2] the percentage which is still applied today. The same percentage is applied if the taxpayer opts for the box for social purposes or for this and the one for the Catholic Church (0.7 + 0.7). This change raised the State's total contribution to the Church from €144 million in 2006 to €242 million in 2007.

The Spanish tax allocation system is quite similar to those in force in other countries. All of them consist of taxpayers voluntarily allocating one or more pre-set percentages of their income tax to officially recognized social entities (public or private, including religious ones; Silvestri, 2021; Strečanský & Török, 2016). What distinguishes the Spanish model from the others is, first, that Spanish taxpayers cannot choose the specific entity to which their tax allocation is directed, with the exception of the Catholic Church. Second, that in Spain, other religious denominations do not receive tax allocations. The State funds religious confessions other than Catholicism with which it has agreements through direct grants (Luque Mateo, 2015). And third, that in Spain (and other countries, such as Portugal and Italy), the allocation is made directly on the income tax return form.

From the above description, one can see that the tax allocation is a charitable donation with unique features (Bullain, 2004). First, the allocation does not represent any direct cost to the taxpayer (but it does have an opportunity cost, as it may reduce the funds available for the government's general expenditures), unlike other donations, some of which benefit from IRPF tax credits. Taxpayers can only decide whether to allocate a percentage of their tax liability to certain purposes, and if so, whether they want it to be allocated solely to the Catholic Church, only to other social purposes (as mentioned above, without the power to choose which one) or to both. Second, taxpayers cannot decide how much money to allocate. If the taxpayer's tax liability is positive, the amount will always be 0.7% of the tax liability (or 1.4%, if both boxes are checked). If the taxpayer's tax liability is zero or has not filed an IRPF return, the taxpayer cannot contribute to the allocation. Thus, the taxpayer's decision is not influenced by either economic costs or tax savings (as is the case with charitable giving, as shown in the literature: e.g., Andreoni & Payne, 2013), as the payable tax is the same, regardless of whether the taxpayer ticks one box, both or none. Finally, unlike charitable donations themselves, the decision to allocate the tax is not visible to

[2] Since 2018, companies also have the option of allocating 0.7% of their corporate tax liability, but in this case only to social purposes.

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third parties; therefore, this behaviour cannot be driven by reputational factors, although it can be influenced by social norms.

The fact that the law offers taxpayers four options (tick the box for the Catholic Church, for other social purposes, both or neither) and that we can know taxpayers' choice as expressed in their income tax returns provides a rich source of information to try to answer questions that, to the authors' knowledge, have not yet been addressed before in the literature: How do taxpayers opting for each of the aforementioned alternatives differ, and how are their profiles related to the determinants of charitable giving systematized by the literature? The answers to these questions can be relevant in identifying the individuals who should be targeted by policymakers and non-profit organizations to encourage them to tick a particular tax allocation box on their personal income tax return.

The present paper aims to answer these questions, with the help of a database published by the Spanish Tax Agency (*Agencia Estatal de Administración Tributaria*, AEAT). This database includes the number of IRPF taxpayers/returns that choose each option, for 2015–2021, grouping them according to certain common socioeconomic characteristics, such as their Autonomous Community (the Spanish political region) of residence, gender, age, taxable income or tax liability. Therefore, we do not have tax microdata at the individual level, but we do have detailed information on some 3800 groups of taxpayers per year, resulting from considering all combinations of the above criteria.

Using this database, we conducted estimates to identify the determinants of taxpayers' choice of each one of the four options available to them. The results suggest the existence of two clearly delimited and opposing profiles of taxpayers: On the one hand, those who do not tick any tax allocation box or tick both; on the other hand, those who tick only one box, either the one for the Catholic Church or the one for other purposes of social interest.

The paper makes a number of contributions. First, it broadens the literature on the determinants of the decision to donate and, in particular, to donate to a particular purpose. Second, to the best of our knowledge, it is the first application adopting this approach to the topic of percentage tax designation. Finally, in the field of Spanish tax allocation, the results obtained allow us for a discussion of potential ways to make it easier for taxpayers to be aware of the implications of the various options available and to facilitate and encourage the exercise of their preferred option.

The paper is structured in the following sections. Section 2 briefly reviews the extensive literature on charitable donations. Section 3 describes in more detail the database and presents and discusses some basic descriptive statistics. Section 4 formulates the hypotheses to be tested, explains the estimates performed and presents and discusses the results obtained and their main implications. The paper ends with some concluding remarks.

2 | LITERATURE REVIEW

The literature on percentage tax designation is scarce and basically focuses on characterizing this instrument and assessing its effects on philanthropy (Bullain, 2004; Silvestri, 2021; Strečanský & Török, 2016). However, as already noted, it has not addressed the problem of identifying the factors that determine taxpayers' decisions to allocate a percentage of their income tax directly to social purposes. As explained above, the percentage tax designation is a unique form of charitable donation, made by the State in the name of the taxpayers who so choose. Thus, if we want to know the key drivers of the decision to make this contribution to the Catholic Church or other social entities, we must refer to the literature on determinants of charitable giving, nonetheless,

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bearing in mind the specificities of the percentage tax designation. Our paper is related to two lines of research in this literature: the first line seeks to identify the determinants of the decision to donate; the second, the determinants of the decision to donate for a particular purpose.

In turn, the literature on donations' determinants is extensive and comes from several different disciplines, including economics, psychology and sociology. Regarding economics, Andreoni and Payne (2013) is an essential starting point of reference, summarizing the main contributions to the literature and identifying four complementary approaches to researching about charitable donations. The first approach analyses charitable contributions from the perspective of an individual economic decision in which the preferences and budget limitations of that individual are the only factors in play. The second one considers a market in which charitable donations are the result of a strategic interaction between the donors, the charitable organizations and the government. The third one adds the social component to the previous approach, as it considers that in this market exchanges are not impersonal, but on the contrary, the social links and motivations underlying the decision to make such donations are fundamental. The fourth approach examines the empathic, moral and cultural impulses behind the decision to make a charitable donation.

Bekkers and Wiepking (2011a) conduct a systematic, multidisciplinary review of the literature, which leads them to develop a theoretical model of the main motives underlying charitable donations. These consist on being aware of the need to support the charity; requests by the organization for financial contributions; the economic (and other) costs and benefits of donating; altruism or the wish to achieve the purposes of the charity; the donor's reputation; the psychological benefits of donating; sharing the same values as the organization; and the perception that financial contributions are effective in achieving the charity's cause and purposes. As explained in the previous section, of these reasons, reputation, and economic costs and tax savings do not exist for percentage legislation.

Later, Bekkers and Wiepking (2011b) and Wiepking and Bekkers (2012) identify the predictors of charitable giving and explain their potential effect on the decision to donate, based on the underlying motives previously identified in Bekkers and Wiepking (2011a). Typical characteristics for donors are as follows: 'affiliation with a religion (especially Judaism and Protestantism), stronger religious involvement, a higher age, a higher level of education, income and wealth, home ownership, a better subjective financial position, being married, having children, having a paid job, higher cognitive ability, having prosocial personality characteristics such as empathy and growing up with parents with higher education, income, religiosity and volunteering activity' (Bekkers & Wiepking, 2011b, p. 339). The findings regarding the size of towns, as well as differences in gender, race and political preferences, are inconclusive.

More recently, a group of papers has focused on individuals' charity selection rather than on the general decision to donate. This literature is relatively scarce, thought millions of non-profits compete for a share of the billions of dollars donated to charity annually (Chapman et al., 2024). They find that different kinds of donors contribute money to diverse categories of charitable organizations.

This latest literature finds, for instance, that women are more likely to donate to animal charities, whereas political and sports causes are more typical for men (e.g., Chapman et al., 2024; Neumayr & Handy, 2019, for a sample in Austria). Older people tend to give to religious and health-related charities, whereas younger people give to environmental groups and animal welfare (e.g., Chapman et al., 2018, for two studies on Australian charities). Politically progressive donors are more likely to give to international organizations compared to conservative donors (e.g., Chapman et al., 2018; Wiepking, 2010, from the Giving in the Netherlands Panel Study).

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Delving into religious charities, individuals who are more likely to support them are older people (e.g., Chapman et al., 2018), conservatives (e.g., Chapman et al., 2018; Forbes & Zampelli, 2013) and, especially, religious people. Moreover, Vaidyanathan et al. (2011) argue that, in explaining differences in generosity, what matters most is not the ideology of individuals, but whether they are regularly engaged in religious, political and civic practises. Moreover, Brooks and Lewis (2001) conclude that people with low trust in the federal government are more willing than people with high trust to donate to religious organizations, as well as to devote part of their time to non-profit organizations, both religious and nonreligious.

Chapman et al. (2020, 2024) go a step further by using the social identity approach to try to explain the underlying causes of the different identities of individuals making donations to different types of charitable organizations. According to this approach (proposed by Tajfel, 1981), people become aware of, and align with, the norms and behaviours that are common and accepted within their social group. Previously, Chapman et al. (2018) suggested that the norms linked to donors' social identities affect their choice of charity but did not explicitly examine this idea. Other authors explained charity selection by individuals in a different way. For instance, Breeze (2013) finds that donors' choices are frequently shaped by their individual preferences, backgrounds and life experiences. Moreover, the tendency to keep supporting familiar causes and organizations from the past significantly impacts their present donation decisions.

Specifically, Chapman et al. (2020) analyse information from the responses to a global virtual questionnaire given to 1849 individuals from 117 countries. In particular, these authors find that donors frequently named specific social identities when explaining giving in relation to the self, that is, giving that accrues benefits to the donor. In contrast, participants highlight beneficiary identities when talking about giving in relation to the other, that is, donating money to organizations that benefit targets outside the donor. The authors also find that motives focused on others are generally more common than those focused on oneself, and that the incidence of these two general issues varies significantly depending on the type of charitable organization.

Chapman et al. (2024) survey 1735 people from 117 countries and detect that people agree their social groups more typically support certain causes, though with varying degrees of consensus within each social group. Men identify political and sports causes as more typical for them; women identify animal, culture and social services causes; younger people, sport and environmental charities; older people identify religious, political and health charities; conservatives identify religious causes; progressives identify environment, civic and advocacy, animal and development and housing charities. Lastly, while 85% of religious participants say that giving to religious causes is normative for their group, only 5% of nonreligious participants respond that.

Moreover, the authors ascertain that those normative causes generally align with observed preferences, which suggests that social identities provide prescriptive information not only about whether to give (something demonstrated in previous literature), but also about which causes members of a group typically support. This is particularly true for religious-based groups, since, as stated above, research on actual charity choices finds that religious people are much more likely to give to religious charities than non-religious ones (e.g., Chapman et al., 2018, 2024; Forbes & Zampelli, 2013; Helms & Thornton, 2012).

With regard, specifically, to the percentage tax designation, as far as we know, there is practically no research seeking to identify the determinants of tax allocation to the Catholic Church and social purposes in Spain. The existing literature simply provides descriptive, historical and legal information. Only Domínguez Rojas (2003) carries out an econometric analysis, using provincial data on the determinants of the percentage designation, but only for the Catholic Church, and for the period 1995–1998. As explained in Section 1, at that time, the percentage designation model

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was very different to the one now in force. Instead, our paper uses data on groups of taxpayers for the period 2015–2021 and estimates the determinants behind each one of the four options offered to the taxpayer.

3 | DATABASE AND BASIC DESCRIPTIVE DATA

As already noted above, the empirical exercise uses a database published by the AEAT.[3] It shows the total number of IRPF returns that opt for each one of the four alternatives of tax allocation for 2015–2021, for groups of taxpayers, being broken down according to various characteristics: by whether the tax return was filed individually or jointly (the latter option usually applies to single-income couples, or where the second income is very low); by the Autonomous Community of residence;[4] by the amount of the taxable income (in nine brackets); by gender; by age (in seven cohorts) and by the tax liability. As also shown in the previous section, these are some of the main variables identified in the literature as explanatory factors for the decision to donate. Table A1 provides a sample of how the information is published by the AEAT for the Autonomous Community of Aragon and for the taxable income bracket between €30,000 and €60,000, for the year 2021. The above information is complemented by different data at regional level which are detailed in Section 4.

It should be noted that we do not have a microdatabase at the level of IRPF taxpayers. This limitation affects the econometric techniques we can use and, to some extent, the interpretation of the results. However, we must emphasize that our database comprises all IRPF tax returns for each year, grouped into some 3800 groups each year. Moreover, the use of aggregated data may be consistent with social identity theory.

Apart from the database on groups of taxpayers, the AEAT also provides another database with aggregated information on the total number of taxpayers checking each box in each Autonomous Community for the period 2007–2021. Figure 1 shows how the number and percentage of taxpayers choosing each option have changed for the total of the Common Regime Autonomous Communities between 2007 and 2021. It should be noted that the total number of taxpayers filing IRPF returns has increased by 18% in the period. The overwhelming majority of taxpayers choose to tick at least one box. Their number has grown between 2007 and 2021, as has the number of taxpayers who choose not to tick any box. The percentage split between those two groups hardly changes from 2007 to 2015: approximately 70% of taxpayers tick a box and the remaining 30% tick none. From 2016 to 2021, the option of not ticking any box gains more than 6 percentage points.

Among those who choose to tick a box, the preferred option is that for social purposes. The number of filers who choose it increases slightly over the period, but its percentage decreases, also slightly. Taxpayers checking the Catholic Church box hardly change until 2011 and then begin to fall steadily, reaching a nearly stable lower level in the last 4 years of the period; in percentage

[3] The information is published on the website of the *Informes anuales de Recaudación Tributaria*, in the section 'Documentación complementaria', titled 'Datos asignación Iglesia Católica y fines sociales IRPF (actualizado 01/07/2025)': https://sede.agenciatributaria.gob.es/Sede/datosabiertos/catalogo/hacienda/Informes_anuales_de_Recaudacion_Tributaria.shtml.

[4] The database only has information on taxpayers residing in the so-called Common Regime Autonomous Communities. The Foral Community of Navarre and the provinces of the Community of the Basque Country regulate and administer their own personal income tax and tax allocation.

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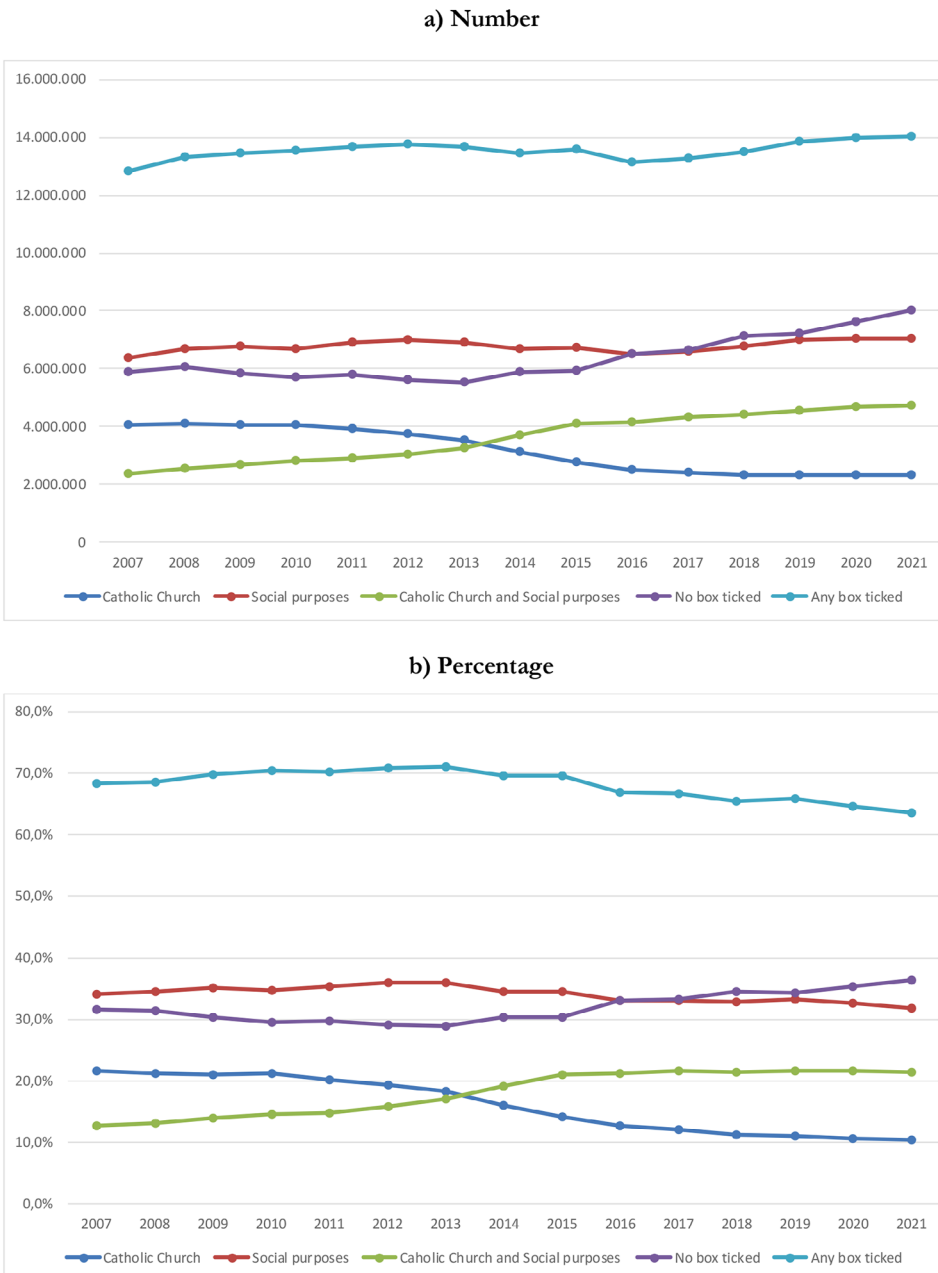

FIGURE 1 Taxpayers ticking each box in their IRPF return, 2007–2021. (a) Number. (b) Percentage. *Source*: Own elaboration, based on AEAT data.

terms, the fall is continuous. The number of taxpayers ticking both boxes increases throughout the period, although the percentage it represents over the total number of taxpayers has stabilized since 2015. In 2014, the number of taxpayers who checked both boxes exceeded those who ticked only the Catholic Church box, which then became the least-chosen option.

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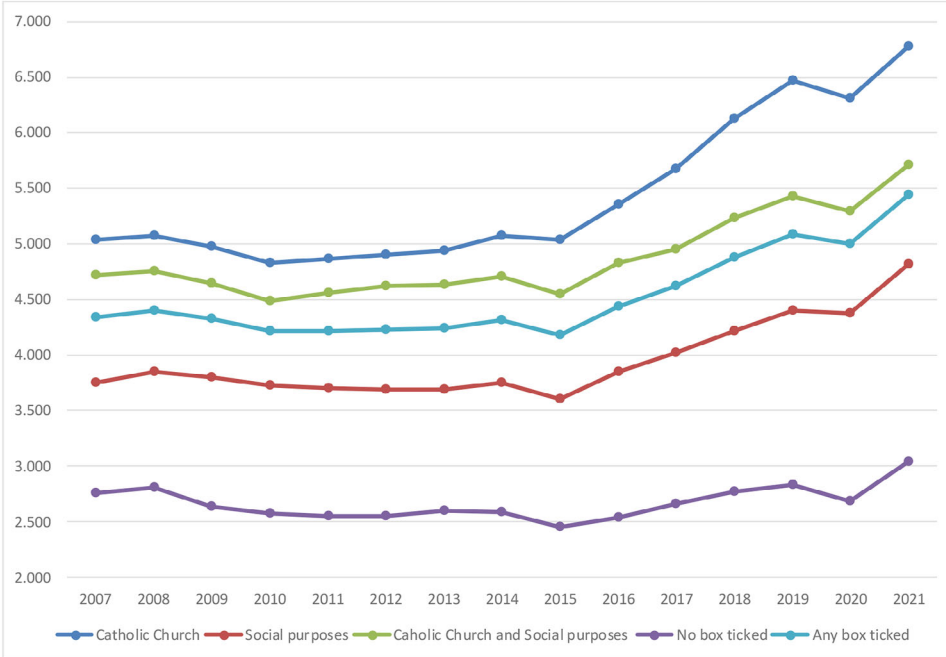

FIGURE 2 Average IRPF tax liability of taxpayers choosing the different options, 2007–2021 (in Euros).
Source: Own elaboration, based on AEAT data.

From Figure 1, it could be conjectured that, with the end of the Great Recession, most of the new IRPF filers seem to have opted not to check any box, perhaps because they prefer direct State intervention in activities of social interest.

Figure 2 shows the tax liability per taxpayer choosing each one of the tax allocation options. Given the progressive nature of IRPF, that variable is a good indicator of their average income, one of the determinants of charitable donations. As the figure shows, the average tax liability (and thus, average income) of the taxpayers checking any box is far higher than for those choosing to check neither. From 2016 onwards, the average tax liability rises significantly, because tax liabilities increase clearly more than the number of taxpayers who decide to tick any box. The increase is especially outstanding for taxpayers who decide to tick only the Catholic Church box, who are the richest during the whole period considered.

From the tax liability data in Figure 2, the amount of the tax allocation per taxpayer can be calculated directly. The average tax allocation to the Catholic Church in the period under consideration is €38 per year, to other social purposes, €28, and to both purposes, €34.

4 | APPLICATION

4.1 | Hypotheses to be tested

The information available in the database on groups of taxpayers allows us to propose the following two compatible hypotheses, related to the two lines of research followed in the literature on charitable giving and described in Section 2:

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Hypothesis 1. The profile of taxpayers who do tick at least one tax allocation box on their IRPF return is different from that of taxpayers who do not tick any box.

According to the results of the literature on charitable giving, the profile of taxpayers who do tick at least one box may resemble that of donors, whereas the profile of taxpayers who do not tick any box should exhibit the opposite characteristics. Therefore, we expect that the option of not ticking any box be associated with people who are non-religious or with little religious involvement, young, without family, with lower educational level and low income.

In addition to the above characteristics, the behaviour of these taxpayers may be due to other reasons related to the unique features of tax allocation, which will be difficult to isolate. Some taxpayers will leave the boxes blank because they do not fully understand the consequences of their decision: For instance, thinking the tax allocation would cost them money, or being unsure whether they can tick a box if they have a zero or negative tax payable (the difference between the tax liability and tax credits), or not understanding the consequences of ticking or not ticking a particular box, and so forth. It is also possible for some taxpayers to simply apply the default option, which is leaving the boxes blank. There is ample literature showing the effect of default options on people's behaviour (in the context of this topic, see, e.g., Everett et al., 2015).

Hypothesis 2. The profile of taxpayers who choose to tick only the box for the tax allocation to the Catholic Church on their IRPF return is different from that of those who tick only the box for other social purposes and those who tick the two previous boxes.

In addition to the general profile of donors (religious people or those highly involved in religion, older, with family, with a higher educational level and high income), the strand of the literature on charity selection has identified certain characteristics for those who donate to specific purposes (Chapman et al., 2018, 2024; Forbes & Zampelli, 2013; Helms & Thornton, 2012). In our case, we can only draw on the results obtained for the Catholic Church because, as we have already explained, the option of tax allocation for social purposes does not allow taxpayers to specify their earmarking for a particular activity or institution. The exercise is further complicated by the possibility offered to taxpayers to tick both boxes, which may contribute to mixing up the profiles.

With these caveats, and assuming that the profile of individuals who only donate to religious organizations is similar to that of those who tick the box for the Catholic Church on their income tax return, the profile of the taxpayer who ticks the box for the Catholic Church is that of an older, conservative person, with little trust in institutions, religious and involved in religious practise.

Again, it is also necessary to consider the specific characteristics of tax allocation to fully understand the behaviour of taxpayers. Thus, taxpayers who tick only the Catholic Church box also seem to reject having part of their IRPF go to other social purposes, given that if they ticked both boxes, the Catholic Church would still receive the same allocation (as taxpayers are reminded by the online IRPF return programme), and the direct cost for them continues to be null. The same could be suggested for taxpayers ticking only the box for other social purposes, as they would seem to object to their taxes being allocated to funding the Catholic Church. This may be because both groups of taxpayers disagree with how the institution not chosen uses the money; because it goes against their principles, interests or beliefs; or because they think the money will not be used productively and in an efficient way or would be better spent elsewhere.

We would expect the profile of taxpayers ticking both boxes to be different from the above. These would be citizens who want as much money as possible to go to social purposes, regardless

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TABLE 1 Descriptive statistics (in Euros).

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
Returns_{jt} (Catholic Church)	27,333	12.433	11.830	0	100
Returns_{jt} (social purposes)	27,333	24.570	13.527	0	100
Returns_{jt}(both boxes ticked)	27,333	21.464	13.732	0	100
Returns_{jt}(no box ticked)	27,333	41.533	21.976	0	100
Women_{jt}	27,333	0.494	0.500	0	1
Age_{jt}	26,678	45.532	20.163	9.5	74.5
IndivReturn_{jt}	27,333	0.532	0.499	0	1
$\text{TaxLiability}pc_{jt}$	18,040	20,092.000	84,959.190	3.60e − 06	8,200,000
Catholics_{rt}	25,757	69.119	10.285	46.8	91.5
Observants_{rt}	25,757	13.945	5.472	0	29.6
Ideology_{rt}	25,757	4.877	0.438	3.74	6
Politics_{rt}	25,757	8.854	4.524	0	22.2
Education_{rt}	25,757	85.847	3.510	77.518	94.439
SmallMun_{rt}	25,757	15.558	11.493	0.922	37.024
Agriculture_{rt}	25,757	4.134	3.008	0.059	10.362
Inequality_{rt}	25,757	5.792	1.072	4.3	10.1
Poverty_{rt}	25,757	21.622	7.181	9.7	38.8
$\text{SocialSpend}pc_{rt}$	25,757	411.077	116.579	149.174	740.887
$\text{GDP}pc_{rt}$	25,757	23,502.160	4466.584	16,391.2	36,331.8

Source: Own elaboration.

of who manages the money (or without excluding an agent, as in the two previous scenarios). Some organizations (in some cases with the backing of the Catholic Church, such as *Cáritas*) advertize encouraging taxpayers to tick both boxes.

4.2 | Specification

We adopt the following specification to test the two above hypotheses:

$$\text{Returns}_{jt} = \alpha + \beta \times \text{Group}_{jt} + \gamma \times \text{Values}_{rt} + \delta \times \text{Social}_{rt} + \varphi \times \text{GDP}pc_{rt} + \theta_r + \upsilon_t + \mu_{jt} \quad (1)$$

Based on Equation (1), four different models are estimated, which differ from each other in the definition of the dependent variable. In Model 1, the dependent variable is the percentage of tax returns in group j ticking only the Catholic Church box in year t; in Model 2, the percentage of tax returns ticking only the box for other social purposes; in Model 3, the percentage of returns ticking both boxes; and in Model 4, the percentage of returns ticking neither.

The explanatory variables are selected based on the findings provided by literature on charitable giving and are classified in several blocks, with their descriptive statistics appearing in Table 1. The first block (named *Group*) includes the variables provided by the AEAT that reflect socioeconomic features of the individuals grouped according to these characteristics. Thus, the variable Women_{jt} is a dummy variable showing whether the taxpayers in group j are women (1) or men (0),

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and Age_{jt} is the average age of the group of taxpayers. The dummy variable IndivReturn_{jt} shows whether the group filed individual (1) or joint (0) tax returns. Finally, the variable Tax Liability pc_{jt} shows the average tax liability of that group of taxpayers. We use the latter variable as a proxy for taxpayers' income, as the only alternative information on income provided by the database is the tax base bracket into which the different groups of taxpayers fall, which has very little variability throughout the database. Given the progressive nature of the IRPF, we believe that this is a reasonable proxy for taxpayers' income, as there will be a strong correlation between this variable and tax liability.

Variables in the remaining blocks are of a regional nature. In the block we call *values*, we include all those variables that may be related to the beliefs and principles of the taxpayers, and culture and social standards. Thus, Catholics_{rt} is the percentage of individuals who self-identify as Catholics in region r in which taxpayer group j resides. Observants_{rt} is the percentage of individuals who regularly attend Mass in the region. Ideology_{rt} represents the average ideology of the inhabitants of the region on a scale from zero to ten, such that higher scores indicate a population that self-identifies as more right-wing. Politics_{rt} represents the average valuation of politics by the inhabitants of the region, also on a scale from zero (minimum rating) to ten (maximum rating). Three other variables related with taxpayers' values are Education_{rt}, which is the percentage of population aged 16–24 residing in the Autonomous Community with at least a compulsory secondary education (*Educación Secundaria Obligatoria*) or a similar level of qualification; SmallMun_{rt}, which represents the percentage of people in the region which reside in municipalities with fewer than 5000 inhabitants and Agriculture_{rt}, measured as the weight of agriculture in total value added.

The block called *social* includes three variables that reflect the level of poverty and inequality and the weight of social policies developed in each Autonomous Community. Inequality_{rt} is the quotient between the average income obtained by the highest and lowest quintiles, such that a higher value indicator means more income inequality. Poverty_{rt} is the at-risk-of-poverty rate, that is, the percentage of people below the poverty threshold, which is set at 60% of the median annual income per consumption unit. An increase in either of these two indicators could be associated with greater awareness of the need for financial resources directed to religious or social purposes.

$\text{SocialSpend}pc_{rt}$ is the quotient between spending corresponding to the area of 'Social protection' within the Autonomous Community's functional classification of public spending, and the population of that Autonomous Community. Higher values for this indicator could reduce the desire to contribute with the tax allocation, given that the objectives of the beneficiary entities are already being attended to directly by public administrations (García & Marcuello, 2001).

Lastly, $\text{GDP}pc_{rt}$, is GDP per capita in each Autonomous Community. The four models in this section were estimated using regional, θ_r, and time, υ_t, fixed effects. The parameter μ_{jt} is the error term.

Table 2 details, for each variable, its construction, the source of the data and the expected sign in the estimates, according to the results of the literature reviewed in Section 2.

4.3 | Estimates and results

Our database does not have a panel structure, so we cannot estimate panel data models. Moreover, due to the specificities of the AEAT data explained above, which group taxpayers according to certain characteristics, we cannot estimate probabilistic models with binary dependent variables

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TABLE 2 Construction of the variables and expected signs.

Type	Variable	Construction	Source	Expected sign (hypotheses)	Literature
Group variables	$Women_{jt}$	Dummy variable: women (1) or men (0)	*AEAT* database on groups of taxpayers	Model 1: ? Model 2: ? Model 3: ? Model 4: ?	
	Age_{jt}	Average of the cohort	*AEAT* database on groups of taxpayers	Model 1: + (H1, H2) Model 2: + (H1) Model 3: + (H1) Model 4: − (H1)	a, c, h
	$IndivReturn_{jt}$	Dummy variable: individual (1) or joint tax return (0)	*AEAT* database on groups of taxpayers	Model 1: ? Model 2: ? Model 3: ? Model 4: ?	
	Tax Liability pc_{jt}	Average tax liability of the group	*AEAT* database on groups of taxpayers	Model 1: + (H1) Model 2: + (H1) Model 3: + (H1) Model 4: − (H1)	a, h
Regional variables	$Catholics_{rt}$ (values)	Individuals who self-identify as Catholics (%)	*Centre for Sociological Research (Centro de Investigaciones Sociológicas, CIS) barometer for December of each year*: https://www.cis.es/catalogo-estudios/resultados-definidos/barometros	Model 1: + (H1, H2) Model 2: + (H1) Model 3: + (H1) Model 4: − (H1)	a, c, d, f, h
	$Observants_{rt}$ (values)	Individuals who regularly attend mass (%)	*CIS barometer*	Model 1: + (H1, H2) Model 2: + (H1) Model 3: + (H1) Model 4: − (H1)	a, g, h
	$Ideology_{rt}$ (values)	Average ideology (0–10 scale; higher value, more right-wing self-identification)	*CIS barometer*	Model 1:+ (H2) Model 2: ? Model 3: ? Model 4: ?	c, d
	$Politics_{rt}$ (values)	Average valuation of politics (0–10 scale)	*CIS barometer*	Model 1: − (H2) Model 2: ? Model 3: ? Model 4: ?	b
	$Education_{rt}$ (values)	Population aged 16–24 with compulsory secondary education (%)	*INE database*: https://www.ine.es/	Model 1: + (H1) Model 2: + (H1) Model 3: + (H1) Model 4: − (H1)	a, h
	$SmallMun_{rt}$ (values)	People residing in small municipalities (%)	*INE database*	Model 1: + (H2) Model 2: ? Model 3: ? Model 4: ?	c, d
	$Agriculture_{rt}$ (values)	Agriculture on total value added (%)	*INE database*	Model 1: + (H2) Model 2: ? Model 3: ? Model 4: ?	c, d
	$Inequality_{rt}$ (social)	Average income of the highest quintile to average of the lowest	*INE database*	Model 1: + Model 2: + Model 3:+ Model 4: −	

(Continues)

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TABLE 2 (Continued)

Type	Variable	Construction	Source	Expected sign (hypotheses)	Literature
	Poverty_{rt} (social)	People below the poverty threshold (%)	*INE database*	Model 1: + Model 2: + Model 3: + Model 4: −	
	$\text{SocialSpend}pc_{rt}$ (social)	Social protection spending to population	*Ministry of Finance and Civil Service* website: https://www.hacienda.gob.es/es-ES/Areas%20Tematicas/Financiacion%20Autonomica/Paginas/DatosPresupuestarios.aspx	Model 1: − Model 2: − Model 3: − Model 4: +	e
	$\text{GDP}pc_{rt}$	GDP per capita	*INE database*	Model 1: ? Model 2: ? Model 3: ? Model 4: ?	

Note: (1) Regional variables are calculated for the region *r* in which taxpayer group *j* resides. (2) In Model 1, the dependent variable is the percentage of tax returns in group *j* ticking the Catholic Church box in year *t*; in Model 2, the percentage of tax returns in group *j* ticking the box for other social purposes; in Model 3, the percentage of tax returns ticking both boxes; in Model 4, the percentage of tax returns ticking neither. (3) The hypotheses are based on the following works from the literature: (a) Bekkers and Wiepking (2011b), (b) Brooks and Lewis (2001), (c) Chapman et al. (2018, 2024), (d) Forbes and Zampelli (2013), (e) García and Marcuello (2001), (f) Helms and Thornton (2012), (g) Vaidyanathan et al. (2011) and (h) Wiepking and Bekkers (2012).
Source: Own elaboration.

either. Therefore, we have opted to estimate pooled ordinary least squares. The observations were weighted applying the percentage represented by each group of taxpayers over the total tax returns for each year.

As Table A2 shows, there are no severe significant correlations between the explanatory variables, but the examination of the variance inflation factor shows very high values that forced us to remove dummies for Autonomous Communities from the estimates (see Table A3). Table 3 presents the results obtained for each of the four models for robust heteroscedasticity-consistent standard errors. When reading the results, it should be remembered that our unit of observation is not taxpayers, but groups of taxpayers defined by shared characteristics.

The results of the estimates only partially corroborate the two hypotheses we put forward above. Furthermore, these estimates highlight two additional results that we did not expect a priori. More concretely, what the results obtained seem to indicate is that there are two clearly delimited and opposing profiles of taxpayers: On the one hand, those who do not tick any tax allocation box or tick both; on the other hand, those who tick only one box, either the one for the Catholic Church or the one for other purposes of social interest.

In effect, as hypothesis H1 proposes, the profile of taxpayers who do not tick any box is clearly different (in fact, the opposite) to that of those who tick only one box. But, unlike what H1 also proposes, it has many similarities with the profile of taxpayers who tick both boxes. The percentage of taxpayers who do not tick either box and those who tick both boxes are positively associated with younger taxpayers and those living in regions with lower percentages of Catholics and observant people and higher percentages of left-wing, more educated, less traditional citizens (as reflected by the negative sign of the coefficient of the variable *agriculture*), with lower per capita income and lower percentages of poverty and social spending. These characteristics are consistent with those found in the literature on charitable giving regarding people who do not make charitable donations, except for the coefficient of educational attainment, which has the opposite sign.

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TABLE 3 OLS estimates of taxpayer profiles according to tax allocation with robust heteroscedasticity-consistent standard errors.

Variables	Catholic Church (1)	Social purposes (2)	Both boxes (3)	Neither box (4)
Women_{jt}	0.918***	1.082***	0.106	−1.971***
	(0.0937)	(0.122)	(0.196)	(0.246)
Age_{jt}	0.345***	0.272***	−0.145***	−0.472***
	(0.00345)	(0.00362)	(0.00666)	(0.00679)
IndivReturn_{jt}	3.864***	4.669***	11.03***	−19.68***
	(0.0916)	(0.133)	(0.163)	(0.264)
$\text{TaxLiability}pc_{jt}$	0.000112***	0.000156***	−4.58e − 06	−0.000268***
	(1.95e − 05)	(1.18e − 05)	(5.76e − 06)	(2.72e − 05)
Catholics_{rt}	0.0359***	0.0640***	−0.0384**	−0.0626***
	(0.00907)	(0.0132)	(0.0190)	(0.0236)
Observants_{rt}	0.155***	0.232***	−0.241***	−0.152***
	(0.00980)	(0.0141)	(0.0201)	(0.0256)
Ideology_{rt}	2.935***	4.903***	−4.417***	−3.445***
	(0.134)	(0.210)	(0.294)	(0.381)
Politics_{rt}	−0.0765***	−0.161***	0.193***	0.0346
	(0.0124)	(0.0178)	(0.0261)	(0.0349)
Education_{rt}	−0.438***	−0.807***	0.717***	0.560***
	(0.0256)	(0.0360)	(0.0545)	(0.0643)
SmallMun_{rt}	0.00612	−0.0235**	0.0587***	−0.0421**
	(0.00896)	(0.0111)	(0.0153)	(0.0206)
Agriculture_{rt}	0.152***	0.683***	−0.299***	−0.533***
	(0.0326)	(0.0449)	(0.0646)	(0.0909)
Inequality_{rt}	−0.0328	−0.00436	0.109	−0.0735
	(0.0613)	(0.0802)	(0.121)	(0.154)
Poverty_{rt}	0.147***	0.344***	−0.369***	−0.115***
	(0.0135)	(0.0181)	(0.0264)	(0.0332)
$\text{SocialSpend}pc_{rt}$	0.00364***	0.0146***	−0.00460***	−0.0148***
	(0.000762)	(0.000982)	(0.00156)	(0.00187)
$\text{GDP}pc_{rt}$	0.000320***	0.000564***	−0.000234***	−0.000660***
	(1.83e − 05)	(2.49e − 05)	(3.34e − 05)	(4.50e − 05)
2016	−0.675***	1.894***	−3.637***	2.482***
	(0.203)	(0.251)	(0.393)	(0.486)
2017	−1.636***	1.697***	−3.865***	3.874***
	(0.203)	(0.257)	(0.399)	(0.495)
2018	−2.803***	0.708**	−3.838***	5.981***
	(0.217)	(0.279)	(0.427)	(0.534)
2019	−3.369***	0.237	−3.115***	6.305***
	(0.224)	(0.287)	(0.438)	(0.533)

(Continues)

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TABLE 3 (Continued)

Variables	Catholic Church (1)	Social purposes (2)	Both boxes (3)	Neither box (4)
2020	−2.350***	2.514***	−5.497***	5.406***
	(0.236)	(0.313)	(0.484)	(0.559)
2021	−3.427***	0.499	−5.475***	8.670***
	(0.263)	(0.341)	(0.516)	(0.642)
Constant	−0.152	13.23***	13.76***	71.44***
	(2.262)	(3.221)	(4.746)	(5.733)
Observations	17,098	18,063	18,025	18,666
R-squared	0.763	0.721	0.594	0.612

Note: ***, ** and * indicate statistical significance of 1%, 5% and 10%, respectively. Robust standard errors are shown in parentheses.
Source: Own elaboration.

Notwithstanding the above, there are some differences between the two groups of taxpayers. The percentage of those who tick both boxes increases among taxpayers residing in regions that value politicians more positively and with more small municipalities, whereas the percentage of those who do not tick either box increases among men, with lower incomes and married (proxied by the variable *indivreturng*).

It is not easy to interpret why the profile of taxpayers who tick both boxes is so similar to those who tick neither, contrary to our expectations. In our view, the estimated results suggest that, on the one hand, there is a profile of taxpayers more favourable to public intervention, at least in social issues. This group may tick neither box if they support the exclusive action of the public sector in developing social policies, or tick both boxes to favour complementary action by any entity, religious or otherwise, with social purposes. On the other hand, there is a profile of taxpayers less favourable to public intervention in these matters, preferring the exclusive intervention of the Catholic Church or, alternatively, of other entities with social purposes. Therefore, the choice to tick both boxes or neither reflects a more inclusive or neutral position, as these individuals are less concerned about the specific destination of their contribution and support shared or exclusive public management of it. In contrast, ticking only one box indicates a determined and exclusive stance, guided by a clear preference and likely greater personal involvement in selecting a specific entity to manage social intervention.

It is also possible that taxpayers' decisions can, to some extent, be explained by arguments from behavioural economics, perhaps complementary to the above interpretation. On the one hand, as Table 3 shows, in Model 4, the estimated intercept has a very high value, which seems to indicate that the alternative of not to check any box operates, to a large extent, as a default option for taxpayers, irrespective of their characteristics. On the other hand, it is conceivable that a large proportion of taxpayers who tick both boxes would not be interested in ticking either box. However, after the electronic IRPF return programme, once the return has been completed, it reminds them of the option they have taken (a reminder that will surely exert some psychological pressure on taxpayers), and perhaps also conditioned by the absence of direct cost to them of adopting one or the other option, these same taxpayers, who do not want to favour only one particular option, choose to tick both boxes. If our reading is correct, many of those who tick the two boxes would not be doing so to intentionally favour both purposes simultaneously, but to favour neither. There

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may also be taxpayers who are unwilling or unable to incur the cost of knowing the implications of the various options presented to them and choose to tick both boxes. If these interpretations are plausible, then the option of ticking both boxes would also function, to a certain extent, as a default option.

Let us now analyse the results related to hypothesis H2. As this hypothesis proposes, the profile of the taxpayers who check the box for the Catholic Church is very different (in fact, as mentioned above, it is the opposite) to that of the taxpayers who tick both boxes. But, contrary to what H2 also formulates, it is almost the same profile as those of taxpayers who tick only the box for other purposes of social interest. The percentage of taxpayers who tick only one box is positively associated with women, older and high-income taxpayers and those living in regions with higher percentages of Catholics, observant, right-wing, less educated, more traditional people, with poorer opinions of politics and higher per capita income, as well as with higher percentages of poverty and social spending. These characteristics also fit well with those that the literature on charitable giving has identified for individuals who donate to religious entities.

The only difference in the significance and sign of the estimated coefficients between taxpayers who tick only the Catholic Church box and those who tick only the social purposes box is that the latter live in regions with a higher percentage of larger municipalities and therefore, probably, with less traditional citizens. However, the size of the estimated coefficients is almost always higher for taxpayers who opt for the box for social purposes, which suggests that taxpayers who present the characteristics we have just listed are more inclined to opt for this box than for the one for the Catholic Church.

As explained above, we believe that the coincidence of the profiles of the taxpayers who tick a single box may be because in both cases they are less favourable to public intervention in social matters. The explanation may lie in the fact that Spain is an example of the Mediterranean welfare model, where the Catholic Church, with a prominent position, and increasingly also third sector organizations, play a central role in the provision of social services, complementing—and, on occasions, replacing—the State (Bretos et al., 2020).

Additionally, it should be considered that the activities financed with both these boxes may not be very different. Revenue from the Catholic Church box is used, fundamentally, for the Church's operating expenses, whereas the box for other social purposes finances specific social programmes, which may coincide with the activity of the Church: In fact, there are organizations linked to the church (such as *Cáritas*), which receive revenues from both boxes. Therefore, the same type of people (elderly, Catholic, practising, right-wing, etc.) may prefer to directly finance the Catholic Church or specific projects.

4.4 | Implications of the results

The results obtained in this paper may be useful for policymakers, the Catholic Church, other non-profit organizations and fundraisers. Public decision-makers should be neutral regarding the number of taxpayers who choose each option or to the greater or lesser amount of their allocations. Their role should be to ensure that taxpayers fully understand the implications of ticking each box and to facilitate the exercise of their desired option. From our reading of the results, it appears that this may not be the case, particularly for the first objective, and that some taxpayers' behaviour may be influenced by their understanding of the allocation. The information provided on this subject in the IRPF Practical Manual published annually by the AEAT is very limited and

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presumably insufficient (see AEAT, 2025, p. 49).[5] The return form (which is what most taxpayers consult; it should be noted that the first of the two volumes of the aforementioned manual has 1558 pages) only displays the two boxes and confirms their compatibility but not explain the consequences of not ticking either one.

Therefore, the government should improve the information it provides to taxpayers on all these issues. However, this should not be limited to the time of filing of the income tax return, when taxpayers make their decisions under specific psychological conditions and may not pay sufficient attention to issues that probably seem of secondary importance at that time. Furthermore, to better clarify the consequences of checking each box and to avoid taxpayer indifference, perhaps a box could be added to the tax return form so that taxpayers could indicate, if applicable, their desire not to allocate any amount of their tax liability directly to social or religious causes. This would clarify the consequences of each option and involve all IRPF taxpayers in the process of allocating part of the taxes they pay (in this regard, Wygnański, 2016, in the case of Poland, argues that tax allocation is closer to the principles of participatory budgeting than to philanthropy).

The objective of the Catholic Church and other entities potentially benefiting from the allocation will, logically, be to maximize the number of taxpayers who tick the corresponding box or the amount received through it. The results obtained in this paper can be useful in identifying which individuals should be targeted to achieve these objectives. Based on the results obtained in the literature reviewed in Section 2, the most promizing ways to fix this issue are to inform potential donors about the need to support these causes and justify the effective use of funds (Saeri et al., 2023), as well as to emphasize aspects of identity and social norms, stressing that the people or groups with which the individual identifies tick the box. Empirical evidence suggests that introducing the possibility of allowing taxpayers to choose—with greater or lesser specificity—the entity beneficiary of their allocation could also help. Although this could complicate the management of the allocation somewhat, it is already done in other countries where tax allocation is in force and, according to the literature, could encourage the participation of taxpayers who identify with the aims of these entities (Chapman et al., 2020, 2024). In the same vein, but also for reasons of fairness, the public authorities could consider extending the tax allocation to confessions other than Catholicism.

If we are right in our interpretation that the difference between the two groups of taxpayers identified above (on the one hand, those who tick only one box; on the other, those who tick both or neither) is associated with their attitude to public intervention in social matters, it does not seem easy to get taxpayers who have opted for an exclusionary option (Catholic Church or social purposes) to start ticking both boxes, nor to get those who do not tick either box to start ticking only one. But perhaps it would be feasible to encourage taxpayers who do not tick either box to choose to tick both. This objective would require preferentially targeting citizens whose profile presents the characteristics we have identified in the estimate of Model 4.[6] Furthermore, if, as the results

[5] 'Important: The tax allocation to the Catholic Church is independent of and compatible with the tax allocation to activities of general interest considered to be of social interest. Therefore, taxpayers may tick both box [105] (tax allocation to the Catholic Church) and box [106] (allocation of amounts to activities of general interest considered to be of social interest); or just one of them, or neither.

The choice of either of the above options, or the absence of a choice, will not entail any financial cost for the taxpayer, and therefore the amount to be paid or refunded resulting from the tax return will not be modified in any case'.

[6] Another measure that could perhaps contribute to increasing tax allocation would be to introduce a box for taxpayers to indicate, where applicable, their desire not to contribute to any specific social or religious cause and to change the effects of not ticking any box so that, in such a case, it would be understood that the taxpayer was choosing to allocate

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suggest, the option of not ticking any box also operates as a default option for taxpayers, regardless of their characteristics, the measures recommended above for governments and beneficiary entities could modify the behaviour of some of these taxpayers, which may currently be motivated by a lack of information or interest in acquiring it, and lead them to tick one or both boxes.

If any of the measures analysed in this section are implemented, their effect on the number of taxpayers who select each option and on the amount of the tax allocation could be assessed in the future, as well as whether there have been changes in the profile of taxpayers who prefer each option.

5 | CONCLUDING REMARKS

Since 2007, the Spanish State's contribution to the Catholic Church has come solely from the tax allocation, a pure system of percentage tax designation consisting of 0.7% of the tax liability (before tax credits) of taxpayers who decide to tick the relevant box on their personal income tax form. Taxpayers may also choose instead, or additionally, to allocate the same percentage to other social purposes or may choose not to tick either box, waiving the option of contributing part of their IRPF directly to religious or social entities. The existence of several options has allowed us to identify the profile of the taxpayers choosing each one of them. To this end, and given that the Spanish tax authority does not publish data at the individual level, our estimates have used information that groups taxpayers according to certain common socioeconomic characteristics. The results obtained indicate that there are two clearly delimited and opposing profiles of taxpayers: On the one hand, those who do not tick any tax allocation box or tick both; on the other hand, those who tick only one box, either the one for the Catholic Church or the one for other purposes of social interest.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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resources to both the Catholic Church and other social causes. The problem, as far as the allocation to the Catholic Church is concerned, is that this solution does not appear to be permitted by Article 2.2 of the Agreement on financial matters between the Spanish State and the Holy See, dated 3 January 1979, reproduced in note 1, which establishes the following: 'For this purpose, each taxpayer must, on the respective tax form, expressly declare their intention as to the destination of the affected portion [to the Catholic Church]. *In the absence of such a declaration, the corresponding amount shall be assigned to other purposes*' (emphasis added).

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REFERENCES

Agencia Estatal de Administración Tributaria, AEAT. (2025). *Manual práctico Renta 2024. Parte I*. Agencia Estatal de Administración Tributaria, AEAT. https://sede.agenciatributaria.gob.es/Sede/Ayuda/24Manual/100.html

Andreoni, J., & Payne, A. A. (2013). Charitable giving. In A. Auerbach, R. Chetty, M. Feldstein, & E. Saez (Eds.), *Handbook of public economics* (Vol. 5, pp. 1–50). North Holland.

Breeze, B. (2013). How donors choose charities: The role of personal taste and experiences in giving decisions. *Voluntary Sector Review*, *4*(2), 165–183. https://doi.org/10.1332/204080513X667792

Bekkers, R., & Wiepking, P. (2011a). A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving. *Nonprofit and Voluntary Sector Quarterly*, *40*(5), 924–973. https://doi.org/10.1177/0899764010380927

Bekkers, R., & Wiepking, P. (2011b). Who gives? A literature review of predictors of charitable giving, part one: Religion, education, age and socialisation. *Voluntary Sector Review*, *2*(3), 337–365. https://doi.org/10.1332/204080511X6087712

Bretos, I., Díaz-Foncea, M., & Marcuello, C. (2020). Why do donors donate?. In I. Garcia-Rodríguez, & M. E. Romero-Merino (Eds.), *Financing nonprofit organizations* (1st ed., pp. 11–22). Routledge. https://doi.org/10.4324/9780429265419

Brooks, A. C., & Lewis, G. B. (2001). Giving, volunteering, and mistrusting government. *Journal of Policy Analysis and Management*, *20*(4), 765–769. https://doi.org/10.1002/pam.1030

Bullain, N. (2004). Explaining percentage philanthropy: Legal nature, rationales, impacts. The International Journal of Not-for-Profit Law, *6*(4).

Chapman, C. M., Dixon, L., Wallin, A., Young, T., Masser, B. M., & Louis, W. R. (2024). We usually give like this: Social norms describe typical charitable causes supported by group members. *Nonprofit and Voluntary Sector Quarterly*, *53*(1), 29–53. https://doi.org/10.1177/08997640231160467

Chapman, C. M., Louis, W. R., & Masser, B. M. (2018). Identifying (our) donors: Toward a social psychological understanding of charity selection in Australia. *Psychology and Marketing*, *35*(12), 980–989. https://doi.org/10.1002/mar.21150

Chapman, C. M., Masser, B. M., & Louis, W. R. (2020). Identity motives in charitable giving: Explanations for charity preferences from a global donor survey. *Psychology and Marketing*, *37*(9), 1277–1291. https://doi.org/10.1002/mar.21362

Domínguez Rojas, J. (2003). Análisis económico-estadístico de la asignación tributaria a la Iglesia Católica en España [Doctoral thesis, Universidad Autónoma de Madrid]. https://repositorio.uam.es/handle/10486/5305

Everett, J. A. C., Caviola, L., Kahane, G., Savulescu, J., & Faber, N. S. (2015). Doing good by doing nothing? The role of social norms in explaining default effects in altruistic contexts. *European Journal of Social Psychology*, *45*(2), 230–241. https://doi.org/10.1002/ejsp.2080

Forbes, K. F., & Zampelli, E. M. (2013). The impacts of religion, political ideology, and social capital on religious and secular giving: Evidence from the 2006 Social Capital Community Survey. *Applied Economics*, *45*(17), 2481–2490. https://doi.org/10.1080/00036846.2012.667555

García, I., & Marcuello, C. (2001). A household model of charitable contributions and tax incentives. *Annual of Public and Cooperative Economics*, *72*(2), 159–181. https://doi.org/10.1111/1467-8292.00163

Helms, S. E., & Thornton, J. P. (2012). The influence of religiosity on charitable behavior: A COPPS investigation. *Journal of Socio-Economics*, *41*(4), 373–383. https://doi.org/10.1016/j.socec.2012.04.003

Luque Mateo, M. Á. (2015). Los modelos de financiación de las confesiones religiosas en Europa. Revista General de Derecho Canónico y Derecho Eclesiástico del Estado, *38*.

Neumayr, M., & Handy, F. (2019). Charitable giving: What influences donors' choice among different causes?. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organisations*, *30*, 783–799. https://doi.org/10.1007/s11266-017-9843-3

Saeri, A. K., Slattery, P., Lee, J., Houlden, T., Farr, N., Gelber, R. L., Stone, J., Huuskes, L., Timmons, S., Windle, K., Spajic, L., Freeman, L., Moss, D., Behar, J., Schubert, S., Grundy, E. A. C., & Zorker, M. (2023). What works

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to increase charitable donations? A meta-review with meta-meta-analysis. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organisations*, *34*, 626–642. https://doi.org/10.1007/s11266-022-00499-y

Silvestri, P. (2021). Percentage tax designation institutions. On Sugden's contractarian account. *International Review of Economics*, *68*(1), 101–130. https://doi.org/10.1007/s12232-021-00364-2

Strečanský, B., & Török, M. (Eds.) (2016). *Assessment of the impact of the percentage tax designations: Past, present, future*. ERSTE Foundation.

Tajfel, H. (1981). *Human groups and social categories*. Cambridge University Press.

Vaidyanathan, B., Hill, J. P., & Smith, C. (2011). Religion and charitable financial giving to religious and secular causes: Does political ideology matter?. *Journal for the Scientific Study of Religion*, *50*(3), 450–469. https://doi.org/10.1111/j.1468-5906.2011.01584.x

Wiepking, P. (2010). Democrats support international relief and the upper class donates to art? How opportunity, incentives and confidence affect donations to different types of charitable organisations. *Social Science Research*, *39*(6), 1073–1087. https://doi.org/10.1016/j.ssresearch.2010.06.005

Wiepking, P., & Bekkers, R. (2012). Who gives? A literature review of predictors of charitable giving, part two: Gender, family composition and income. *Voluntary Sector Review*, *3*(2), 217–245. https://doi.org/10.1332/204080512X649379

Wygnański, K. (2016). *Country report: Poland*. In B. Strečanský, & M. Török (Eds.), *Assessment of the impact of the percentage tax designations: Past, present, future* (pp. 90–96). ERSTE Foundation.

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APPENDIX

TABLE A1 Example of the database provided by the Tax Administration (AEAT) for the year 2021.

Individual or joint tax return	Autonomous Community	Taxable income bracket (Euros)	Gender	Age cohort	Number of returns	Returns ticking the Catholic Church box	Returns ticking the two boxes	Returns ticking the box for social purposes	Returns no ticking any box
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	1: from 0 to 19	6	0	2	0	4
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	2: from 20 to 29	1555	166	288	404	697
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	3: from 30 to 39	8825	897	1675	3189	3064
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	4: from 40 to 49	19,020	2429	4484	7280	4827
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	5: from 50 to 59	18,630	2990	5155	6819	3666
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	6: from 60 to 69	15,742	2489	4284	6130	2839
1: Ind.	02 Aragon	7: between 30,000 and 60,000	H: Male	7: 70 and above	11,697	2903	4069	3017	1708
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	1: from 0 to 19	4	0	3	0	1
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	2: from 20 to 29	1293	101	246	419	527
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	3: from 30 to 39	4970	426	1055	2038	1451
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	4: from 40 to 49	11,556	1476	3096	4727	2257
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	5: from 50 to 59	12,351	2011	3814	4608	1918
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	6: from 60 to 69	10,752	1816	3255	4117	1564
1: Ind.	02 Aragon	7: between 30,000 and 60,000	M: Female	7: 70 and above	7784	2239	3154	1503	888
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	1: from 0 to 19	0	0	0	0	0
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	2: from 20 to 29	28	2	6	5	15
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	3: from 30 to 39	869	64	155	228	422
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	4: from 40 to 49	3299	389	657	1002	1251
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	5: from 50 to 59	4411	688	1104	1269	1350
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	6: from 60 to 69	6098	862	1517	1847	1872
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	7: 70 and above	7297	1625	2357	1491	1824

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TABLE A1 (Continued)

Individual or joint tax return	Autonomous Community	Taxable income bracket (Euros)	Gender	Age cohort	Number of returns	Returns ticking the Catholic Church box	Returns ticking the two boxes	Returns ticking the box for social purposes	Returns no ticking any box
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	1: from 0 to 19	0	0	0	0	0
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	2: from 20 to 29	11	2	1	5	3
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	3: from 30 to 39	323	24	56	120	123
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	4: from 40 to 49	1440	125	323	539	453
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	5: from 50 to 59	943	114	229	330	270
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	6: from 60 to 69	380	37	96	132	115
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	7: 70 and above	261	50	83	53	75

Individual or joint tax return	Autonomous Community	Taxable income bracket (Euros)	Gender	Age cohort	Total tax liability (Euros)	Tax liability returns ticking the Catholic Church box (Euros)	Tax liability returns ticking the two boxes (Euros)	Tax liability returns ticking the box for social purposes (Euros)	Tax liability returns no ticking any box (Euros)	Tax allocation to Catholic Church (Euros)	Tax allocation to Catholic Church and social purposes (Euros)	Tax allocation to social purposes (Euros)
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	1: from 0 to 19	63,011.62	0.00	32,312.59	0.00	30,699.03	0.00	226.19	0.00
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	2: from 20 to 29	12,815,043.88	1,424,904.47	2,388,095.91	3,329,927.18	5,672,116.32	9974.33	16,716.67	23,309.49
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	3: from 30 to 39	75,414,430.22	7,911,253.88	14,593,222.30	26,968,614.98	25,941,339.06	55,378.78	102,152.56	188,780.30
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	4: from 40 to 49	168,609,296.03	22,379,405.89	40,388,014.24	63,554,256.70	42,287,619.20	156,655.84	282,716.10	444,879.80
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	5: from 50 to 59	168,805,473.82	27,739,352.26	47,763,951.09	60,674,291.21	32,627,879.26	194,175.47	334,347.66	424,720.04
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	6: from 60 to 69	135,366,348.31	21,921,594.34	37,315,612.76	51,787,368.28	24,341,772.93	153,451.16	261,209.29	362,511.58
1: Individual	02 Aragon	7: between 30,000 and 60,000	H: Male	7: 70 and above	92,954,698.45	23,588,920.12	32,652,015.04	23,295,903.06	13,417,860.23	165,122.44	228,564.11	163,071.32
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	1: from 0 to 19	32,286.92	0.00	25,256.30	0.00	7030.62	0.00	176.79	0.00

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TABLE A1 (Continued)

Individual or joint tax return	Autonomous Community	Taxable income bracket (Euros)	Gender	Age cohort	Total tax liability (Euros)	Tax liability returns ticking the Catholic Church box (Euros)	Tax liability returns ticking the two boxes (Euros)	Tax liability returns ticking the box for social purposes (Euros)	Tax liability returns no ticking any box (Euros)	Tax allocation to Catholic Church (Euros)	Tax allocation to Catholic Church and social purposes (Euros)	Tax allocation to social purposes (Euros)
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	2: from 20 to 29	10,434,501.07	826,789.06	2,006,297.95	3,396,254.32	4,205,159.74	5787.52	14,044.09	23,773.78
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	3: from 30 to 39	42,133,701.39	3,619,391.24	9,235,949.97	17,106,553.61	12,171,806.57	25,335.74	64,651.65	119,745.88
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	4: from 40 to 49	98,564,922.02	13,098,717.17	26,886,474.95	39,506,000.74	19,073,729.16	91,691.02	188,205.32	276,542.01
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	5: from 50 to 59	113,204,389.98	18,774,068.92	35,360,205.94	41,665,389.01	17,404,726.11	131,418.48	247,521.44	291,657.72
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	6: from 60 to 69	92,592,563.93	16,052,652.03	27,984,845.31	35,113,438.48	13,441,628.11	112,368.56	195,893.92	245,794.07
1: Individual	02 Aragon	7: between 30,000 and 60,000	M: Female	7: 70 and above	60,227,714.67	17,595,969.97	24,202,921.45	11,608,336.96	6,820,486.29	123,171.79	169,420.45	81,258.36
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	1: from 0 to 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	2: from 20 to 29	173,297.66	15,187.15	33,782.45	31,044.88	93,283.18	106.31	236.48	217.31
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	3: from 30 to 39	5,789,489.34	445,987.68	1,053,672.59	1,487,948.75	2,801,880.32	3121.91	7375.71	10,415.64
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	4: from 40 to 49	23,715,067.36	2,943,880.02	4,650,333.22	7,295,978.34	8,824,875.78	20,607.16	32,552.33	51,071.85
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	5: from 50 to 59	33,536,091.97	5,464,402.09	8,596,809.94	9,752,369.31	9,722,510.63	38,250.81	60,177.67	68,266.59

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TABLE A1 (Continued)

Individual or joint tax return	Autonomous Community	Taxable income bracket (Euros)	Gender	Age cohort	Total tax liability (Euros)	Tax liability returns ticking the Catholic Church box (Euros)	Tax liability returns ticking the two boxes (Euros)	Tax liability returns ticking the box for social purposes (Euros)	Tax liability returns no ticking any box (Euros)	Tax allocation to Catholic Church (Euros)	Tax allocation to Catholic Church and social purposes (Euros)	Tax allocation to social purposes (Euros)
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	6: from 60 to 69	43,721,332.51	6,469,693.75	11,012,338.95	12,951,895.29	13,287,404.52	45,287.86	77,086.37	90,663.27
2: Joint	02 Aragon	7: between 30,000 and 60,000	H: Male	7: 70 and above	44,389,430.49	10,089,086.33	14,539,242.77	8,852,751.62	10,908,349.77	70,623.60	101,774.70	61,969.26
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	1: from 0 to 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	2: from 20 to 29	64,351.59	15,946.63	6381.50	27,247.37	14,776.09	111.63	44.67	190.73
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	3: from 30 to 39	2,208,044.94	191,861.75	426,731.15	793,583.40	795,868.64	1343.03	2987.12	5555.08
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	4: from 40 to 49	10,492,808.33	973,442.21	2,385,540.91	3,909,055.71	3,224,769.50	6814.10	16,698.79	27,363.39
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	5: from 50 to 59	7,316,652.25	895,844.37	1,890,372.77	2,466,554.77	2,063,880.34	6270.91	13,232.61	17,265.88
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	6: from 60 to 69	2,464,398.41	240,586.75	650,715.11	850,456.07	722,640.48	1684.11	4555.01	5953.19
2: Joint	02 Aragon	7: between 30,000 and 60,000	M: Female	7: 70 and above	1,386,469.97	248,092.40	447,232.04	280,449.82	410,695.71	1736.65	3130.62	1963.15

Source: Own elaboration, based on AEAT data.

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TABLE A2 Correlation for the explanatory variables.

Variables	$Women_{jt}$	Age_{jt}	$IndivReturn_{jt}$	$TaxLiabilitypc_{jt}$	$Catholics_{rt}$	$Observants_{rt}$	$Ideology_{rt}$	$Politics_{rt}$	$Education_{rt}$	$SmallMun_{rt}$	$Agriculture_{rt}$	$Inequality_{rt}$	$Poverty_{rt}$	$SocialSpendpc_{rt}$	$GDPpc_{rt}$
$Women_{jt}$	1.00														
Age_{jt}	0.00	1.00													
$IndivReturn_{jt}$	0.03	−0.10	1.00												
$TaxLiabilitypc_{jt}$	−0.04	−0.02	0.00	1.00											
$Catholics_{rt}$	0.00	0.01	0.00	−0.03	1.00										
$Observants_{rt}$	0.00	0.00	0.00	−0.01	0.10	1.00									
$Ideology_{rt}$	0.00	0.01	0.00	−0.03	0.58	0.15	1.00								
$Politics_{rt}$	0.00	0.00	0.00	0.00	0.18	−0.18	−0.06	1.00							
$Education_{rt}$	0.00	0.00	0.00	0.03	−0.14	0.03	−0.29	−0.01	1.00						
$SmallMun_{rt}$	−0.01	0.00	0.00	−0.04	0.32	0.29	0.17	0.00	−0.12	1.00					
$Agriculture_{rt}$	−0.01	0.00	0.00	−0.03	0.59	0.14	0.33	0.13	−0.52	0.66	1.00				
$Inequality_{rt}$	0.00	−0.01	0.00	0.01	−0.20	−0.19	−0.04	−0.04	−0.10	−0.44	−0.36	1.00			
$Poverty_{rt}$	0.00	0.00	0.00	−0.02	0.49	−0.19	0.31	0.31	−0.51	0.03	0.48	0.29	1.00		
$SocialSpendpc_{rt}$	0.00	0.01	0.00	−0.01	0.27	0.09	−0.05	−0.04	0.48	0.54	0.15	−0.34	−0.06	1.00	
$GDPpc_{rt}$	0.01	−0.01	0.00	0.04	−0.51	0.12	−0.30	−0.24	0.44	−0.27	−0.54	0.01	−0.72	−0.11	1.00

Source: Own elaboration.

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TABLE A3 Variance inflation factor (VIF) estimates for the variables by considering Autonomous Communities (AC) as control or not.

	With AC		Without	
Variables	**VIF**	**1/VIF**	**VIF**	**1/VIF**
Women_{jt}	1.06	0.95	1.06	0.95
Age_{jt}	1.03	0.97	1.03	0.97
IndivReturn_{jt}	1.09	0.92	1.09	0.92
$\text{TaxLiability}pc_{jt}$	1.02	0.98	1.02	0.98
Catholics_{rt}	14.18	0.07	8.97	0.11
Observants_{rt}	2.62	0.38	2.01	0.50
Ideology_{rt}	8.25	0.12	4.38	0.23
Politics_{rt}	3.16	0.32	2.37	0.42
Education_{rt}	12.74	0.08	6.4	0.16
SmallMun_{rt}	2543	0.00	5.58	0.18
Agriculture_{rt}	76.52	0.01	8.62	0.12
Inequality_{rt}	4.65	0.21	2.69	0.37
Poverty_{rt}	28.16	0.04	9.29	0.11
$\text{SocialSpend}pc_{rt}$	14.31	0.07	4.86	0.21
$\text{GDP}pc_{rt}$	179.37	0.01	7.78	0.13
2016	3.76	0.27	2.78	0.36
2017	6.39	0.16	3.31	0.30
2018	9.51	0.11	3.66	0.27
2019	13.26	0.08	3.87	0.26
2020	7.38	0.14	3.86	0.26
2021	14.02	0.07	5.06	0.20
2	179.13	0.01		
3	23.18	0.04		
4	54.78	0.02		
5	71.93	0.01		
6	49.32	0.02		
7	505.84	0.00		
8	842.19	0.00		
9	189.36	0.01		
10	386.26	0.00		
11	48.33	0.02		
12	662.87	0.00		
13	84.19	0.01		
16	37.26	0.03		
17	42.2	0.02		
Mean VIF	174.92		4.27	

Source: Own elaboration.

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