

ORIGINAL ARTICLE

Can tax regulations moderate revenue diversification and reduce financial distress in nonprofit organizations?

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Abstract

As a result of policies to reduce public deficit, nonprofit organizations have been forced to turn to charitable donations in order to diversify their revenue structure and thus reduce their levels of financial distress. Public administrations have supported this process through tax mechanisms designed to provide a legal framework that will encourage private philanthropy. Our aim is to analyse the role of nonprofit tax regulations in moderating the influence of revenue diversification on insolvency risk. To this end, we drew a sample of 406 nonprofit organizations located in Aragon and Navarre, two European regions with different tax regulations, for the period 2008–2018. Our results reveal that some tax regime requirements, such as the organizational purpose, minimum initial endowment, engagement in commercial activity, and accountability and monitoring standards, have a positive impact on revenue diversification and the reduction of financial distress and vulnerability. However, we also detect differences between regions which suggest that tax harmonization for nonprofit organizations remains a challenge.

KEYWORDS

financial distress, nonprofit, revenue structure, tax regulations

1 | INTRODUCTION

The European Central Bank (2021) gives the reduction of social inequalities priority status in the 2020–24 global strategy. Over the last few years, European Union member states have promoted different actions to address this issue with a twofold aim: economic growth and convergence (Borsi & Metiu, 2015; Hermann, 2014). As social service providers, nonprofit organizations are a key pillar in the fight against social inequality in modern welfare states (European Commission, 2013, p. 5). The 17th Sustainable Development Goal (Goal 17.17) advocates for the development of partnerships among civil society organizations, such as nonprofits, to lead initiatives for addressing environmental challenges and reducing social inequalities (United Nations, 2021). Within Europe, nonprofit organizations play a key role in the European pillar of Social Rights (European Commission, 2018, p. 5). These entities employ 4.18% of the European workforce (Monzón & Chaves, 2017) with approximately 17.41% of the European citizens collaborating with these entities at least once a week (EUROFOUND, 2016). It is important to note the positive interaction between these magnitudes and the reduction of social inequalities in areas such as health, well-being and social trust (Enjolras et al., 2018, p. 106). This positive effect is particularly relevant in these fields, “in which nonprofit institutions frequently account for 40% or 50% of total value added” (United Nations, 2018, p. 5). Although it is hard to measure the full extent of the impact of these organizations (Monzón & Chaves, 2012; Chaves & Monzón, 2019), the above facts are an indication of their importance in European welfare states.

The relationship between nonprofit organizations and the welfare state in Europe is not unique in nature. Four models, the Renan, the Scandinavian, the Mediterranean and the Anglo Saxon, have been identified (Sarasa & Moreno; 1995, Ascoli & Ranzi, 2002; Etxezarreta & Bakaikoa, 2012; Mazeikiene et al., 2014; Johansson & Kock, 2016; Laging & Zganec, 2021). These models are defined according to the origin of their social service funding, the final provider of the social services and the intensity of interaction between public and private sectors in the definition of national social policies. Countries such as Greece, Italy, Portugal and Spain implement the Mediterranean model, in which nonprofit organizations receive public funding for their activities. For instance, the European Union institutions provided funds for initiatives undertaken by the Greek nonprofit sector to address unemployment, support cultural projects, promote gender diversity and provide community services from 2000 to 2013 (Liargovas et al., 2015, pp. 110–111).

However, the public policies introduced to reduce public deficits as a result of the crisis of 2008 posed a threat to the income structure of these organizations, within an increasingly competitive funding environment (Parés et al., 2017; Royster, 2020). These austerity policies had a significant impact in southern European countries, where “despite the high levels of institutional recognition for the considerable social and economic value added by the social economy, government policies following this approach were scarce during the latest economic recession” (Chaves-Avila & Savall-Morera, 2019, p. 487). The current economic crisis caused by the COVID-19 pandemic represents a further challenge to nonprofit organizations. Recently, the International Monetary Fund (2021) predicted an increase in social inequalities in the wake of this pandemic, warning that the future episode of fiscal consolidation will be followed by shrinkage rather than growth in output. Specifically, Moreira et al. (2021, p. 355) draw attention to the case of Mediterranean countries, where “the ability to rebound will be conditioned by their ability to service public debt, and enlarge the continuing income support needed to cushion the societal consequences.” In the previous crisis, the redistribution of scarce public budget resources forced nonprofit organizations to turn to charitable contributions to find new sources of income (Cordes, 2011), requiring

them to improve their management structure. This is one of the conclusions recently expressed by the European Parliament (2021) in relation to the possible recovery of the project for a Statute for European cross-border associations and nonprofit organizations. This document specifically mentions demands for governance and transparency from the managers of these entities. These obligations are especially relevant in a context of emerging income sources, and a shift in the nature of the relationships with the state and other public entities for the provision of welfare and other general interest services (p. 11). Thus, not only the change of context, but also regulatory pressures, are driving diversification of income sources, which implies an increase in the volume of charitable contributions from private actors (Mikołajczak, 2021).

Charity is the act of donating one's own money for those in need (Furnham & Argyle, 1998; García & Marcuello, 2001). It is also a means for nonprofit organizations to diversify their revenue structures and reduce their risk of financial distress or default (Froelich, 1999; Tuckman & Chang, 1991). The European Union has encouraged tax policies aimed at promoting charitable giving in the social economy context (European Parliament, 2021). In this sense, the Social Business Initiative mentioned the need to adapt national tax regimes for the benefit of social enterprises and ethical investment. Similarly, the Start-up and Scale-up initiative insisted on these ideas, pointing out that the Commission should monitor tax schemes/incentives for investment in start-ups/scale-ups, and develop successful, effective approaches to the use of tax incentives to attract capital. Concern for tax policies remains in the most recent pronouncements, such as the Sustainable Growth Strategy 2021, the Recovery Plan—Next Generation EU and the Action plan on Integration and Inclusion 2021–2027. All these regulatory instruments request European countries to work towards creating tax policies favouring the creation of nonprofit organizations in the broader context of social economy.

To this end, European countries have developed specific tax codes for charitable donations, including legal patronage regimes (Blazquez & Peñalosa, 2013; Carbajo, 2006). The regulatory objective of these codes is to efficiently channel private initiative and promote new mechanisms for social participation in the protection, promotion and furtherance of the common good (Palencia-Lefler, 2007). This regulation affects both (a) the tax incentives for charitable giving and (b) the tax requirements for nonprofit organizations to access a special tax regime. Hereafter, the term nonprofit tax regulations will be used when referring to these specific tax requirements. Previous literature has studied the different motivating factors of charitable giving, focusing mainly on tax issues, socio-demographic factors and the financial structure of the organization (Oh & Ki, 2018).

However, although some studies have analysed how tax incentives for charitable giving impact on revenue diversification in nonprofit organizations, we find none that has examined the influence of tax regulations on the revenue structure. Additionally, a revenue diversification strategy might have the potential to reduce financial distress, and thus contribute to the positive effects reported by previous studies. The relationship between nonprofit tax regulations, revenue diversification and financial distress constitutes the research gap we wish to explore. Then, we wonder how tax regulations affect revenue diversification and how great their potential to reduce financial distress levels is.

Our aim, therefore, is to analyse the moderating role of nonprofit tax regulations in the relationship between revenue diversification and financial distress in these entities. We do this by observing a sample of 406 Spanish nonprofit organizations located in two regions, Aragon and Navarre, over the period 2008–2018. The Spanish case has certain features which prompt investigation. In this, as in other European countries, such as Italy and Germany, different tax jurisdictions coexist within the same country. Navarre, for instance, still has its own regional tax laws.

Our sample is made up of nonprofits based in the regions of Aragon and Navarre and thus operating under two distinct tax regimes. The Spanish national tax code also has specific tax regulations giving nonprofit organizations access to a singular tax regime. Finally, the availability of Spain's public financial statements removes some of the shortcomings detected in the samples used in previous studies (Neumayr & Handy, 2019). Our results reveal that some tax regime requirements, namely, organizational purpose of general interest, minimum initial endowment, engagement in commercial activity and the effectiveness of accountability and monitoring mechanisms for nonprofits positively influence the diversification of revenue, thereby reducing the risk of financial distress and vulnerability. However, these effects vary between the two study regions. These findings have several implications. We detect marked regional differences in Europe, even within the same country, and show that the prevalence of regional tax laws in some European countries can enable tax dumping and opportunism aimed at attracting nonprofit organizations to their territories in order to obtain the associated economic and social benefits. Finally, we also highlight that a solution based on a single national tax regime would only be possible after deep debate and reflection.

The rest of this paper is organized as follows. Section 2 contains the literature review and working hypotheses. Section 3 describes the sample, variables and methodology used for the hypothesis testing. The results are presented in Section 4 and discussed in Section 5. Finally, Section 6 provides the main conclusions to be drawn from this study.

2 | THEORETICAL FRAMEWORK

2.1 | Private philanthropy and public contributions in the European context

Recently, a European Commission communication entitled “European Skills Agenda for sustainable competitiveness, social fairness and resilience” (European Commission, 2020a) expressly mentioned nonprofit organizations as key actors in the European Pillar of Social Rights, the European Green Deal, the European Digital Strategy, and the Industrial and SME Strategies. The promotion of social entrepreneurship¹ and transversal skills play a key role in the new European context, where nonprofit organizations stand out as pioneers in job creation, embracing the circular economy and supporting social inclusion and green transition. In particular, these entities play a substantial role as social service providers (European Commission, 2013, p. 5). According

¹ The European Union has driven different initiatives to promote social entrepreneurship. We highlight the Social Business Initiative enacted in 2011 (European Commission, 2011), in which the European Commission proposed an action plan in support of social innovation. Building on this initiative, the European Commission also published the Start-up and Scale-up Initiative (European Commission, 2016). More recently, the European Commission renewed its commitment towards the social economy via the European Pillar of Social Rights and its Action Plan (European Commission, 2018). The pioneering role of these organizations in the development of social rights is also present in the Circular Economy Action Plan (European Commission, 2019), the Sustainable Growth Strategy 2021 (European Commission, 2020b) and the Communication “A Strong Social Europe for Just Transitions” (European Commission, 2020c). Renewed commitment to the promotion of social economy organizations has come with the Pandemic Recovery Plan—Next Generation EU (European Council, 2020), the Action plan on Integration and Inclusion 2021–2027 (European Commission, 2020d), and the Communication “A Renovation Wave for Europe—greening our buildings, creating jobs, improving lives” (European Commission, 2020e). Finally, we should mention the Renewed partnership with the Southern Neighbourhood—A new Agenda for the Mediterranean (European Parliament, 2021b).

to the initiative for a “European Action Plan for Social Economy” (European Commission, 2021, p. 1), nonprofit organizations, as part of the Social Economy, share the objective of systematically putting people first and have a positive impact on local communities. Salamon and Sokolowski (2018, p. 57) group the activities of these entities into three categories: (a) Service; (b) Expressive; and (c) Others. According to these authors, 72% of the third sector workforce in Europe is employed in services, including education, actions against social exclusion, health care and housing and community development. Moreover, Monzón and Chaves (2017) report that nonprofit organizations provide employment to 9,015,740 paid workers out of a total of 13,621,535 within the European Social Economy. Thus they constitute a primary driver of European integration (European Parliament, 1998),² local progress, social dialogue and socio-economic cohesion (Borsi & Metiu, 2015).

As nonprofit organizations have expanded and taken on larger service portfolios, their financial needs have increased (López-Arceiz et al., 2020). In the Spanish case, for instance, the beneficiaries of these entities have increased in number from 17.8 million in 2008 to 43.7 million in 2019, providing a wide range of social services including, primarily, culture (38.3%), education and research (21.7%), environment (10.3%), actions against social exclusion (9.0%) and local development (7.3%) (Spanish Association for Foundations, 2019). Traditionally, these needs have been covered by two main instruments: (a) spending and transfer programs; and (b) tax incentives (Hogarth et al., 2018). Hladká and Hyánek (2017); Randolph, 1995 consider the first category as “aid given to nonprofit organizations from public budgets”.³ In Spain, for instance, between 2010 and 2012, 70% of the necessary funding for nonprofit organizations came from public grants (PwC Foundation 2013, p. 8). Subsequent constraints on the public budget have since limited this source of funding, however. Indeed, the Final Report of the recently completed Third Sector Impact (2020) project concluded that “although government funding is still of major importance for nonprofit organizations, public funds are scaled back in the context of vast austerity measures that have been implemented following the financial crisis of 2008”. Moreover, “on account of scarce resources, nonprofit organizations are tapping new financial resources and diversifying their portfolio”, but this report also recognizes that “the diversification of financial resources carries the risks that managing nonprofit organizations becomes more demanding as accountability requirements of different funders have to be taken into account”. In 2020, the Spanish Association of Charitable Foundations—Asociación Española de Fundaciones (AEF, 2020) conducted an empirical study to analyse variations to the public contribution in the income structure of Spanish nonprofit organizations. This report concluded that “the weight of the public contributions decreased by 1%

² The European Parliament (1998) expressly cites “the role of the nonprofit-making sector in the European political, economic, social and civil integration process.” There are several ways in which these organizations promote European integration according to this resolution: (a) development of social activities; (b) development of local community; (c) development of the European economy; (d) the fight against social exclusion; (e) promotion of volunteerism; and (f) promotion of democracy. Similar contributions can also be found in the Communication “Business in the social economy sector: Europe’s frontier-free market” (European Commission, 1989), the Social Business Initiative (European Commission, 2011) and social innovation policy making. We should also highlight the proposal for a Council Regulation on the Statute for a European Foundation (European Commission, 2012) and the promotion of these entities in the main international development forums (Agenda 2030, G20 and G7) to enhance their visibility as part of the global political agenda (European Commission, 2020f).

³ According to these authors, there are several justifications for public granting: (a) the functions and roles of nonprofit organizations are socially desirable; (b) there are market failures, markets not being sufficient to secure goods or produce them at optimal volumes; and (c) heterogeneous demand leads to the state’s failure to secure public goods and services for individuals and groups with minority preferences.

between 2008 and 2019, while private donations increased by 0.9% in the same period of time”.⁴ This substitution effect between public contributions and private donations has also been tested in the Spanish context by De Andrés-Alonso et al. (2020) and Rey-García (2020). As a consequence, the public administration has sought to promote revenue diversification in nonprofits using the second instrument, the modification of tax laws, in order to provide a legal framework for private philanthropy.

The term “philanthropy” is commonly used in the European context, albeit with some nuances arising from the “social origins” of the welfare state models (Esping-Andersen, 1990) and civil society (Salamon & Anheier, 1998). Thus, common law tradition defines it as a long-term strategic investment and intervention dedicated to building long-lasting and effective change in individuals and communities (Uedoi, 2018). Meanwhile, civil law tradition speaks of “a more strategic, long-lasting (objective), acting at the level of the cause of social problems as to improve the quality of human life” (Lazar & Hatos, 2020).⁵ Lazar and Hatos (2020) identify three philanthropic regimes in the European context where both systems co-exist: (a) great givers; (b) nonprofit donors and volunteers; and (c) direct givers. Anglo-Saxon countries fall into the second category, while civil law jurisdictions largely belong to the first. The main difference between them is the role of public contributions and their interaction with private philanthropy. Thus, private philanthropy plays a more prominent role in Anglo-Saxon countries than in continental countries,⁶ where nonprofit organizations are specifically supported via great givers. In Europe, therefore, nonprofit organizations combine private and public income sources. However, public administrations have been forced to decrease public contributions, while modifying tax regimes in an attempt to encourage different forms of private philanthropy.

2.2 | Charity giving and tax regulation

One of the prominent autonomy-promoting mechanisms in the field of private philanthropy is charitable giving (Sargeant & Woodliffe, 2007), which can be defined as “the donation of money to an organization that benefits others beyond one’s own family” (Bekkers & Wiepking, 2011, p. 927). However, a distinction must be made between charitable organizations and nonprofit organizations. Uedoi (2018) pointed out that the latter perform a philanthropic activity, but have to meet certain requirements and fulfil certain tax obligations in order to qualify as charitable organizations.⁷ Previous literature cites several reasons to promote charitable giving. Vesterlund

⁴ These percentages are especially relevant if we consider what this evolution implies for nonprofit organizations. Thus, the Navarrese Association of Charitable Trusts—Fundaciones de Navarra (FN, 2019) reported that public grants account for 53.2% of the income structure of nonprofits domiciled in this region. Similar percentages apply in the case of Aragonese nonprofit organizations according to the Directory of Aragonese Foundations (DGA, 2017).

⁵ In the Spanish legal framework, private philanthropy demands “*animus donandi*”, which can be defined as the intention of giving without requiring anything in return. The Navarrese tax regime introduces a modification in this “*animus donandi*” via patronage, which is public recognition for donors who promote philanthropy in socio-cultural activities.

⁶ Something similar occurs with venture philanthropy. Leborgne-Bonassié et al. (2019) consider venture philanthropy as “high-engagement and long-term commitment to generate impact through tailored financing, organizational support, and impact measurement and management”. Nevertheless, despite an increase in recent years, venture philanthropy initiatives have not yet become consolidated in Spain (Rey-García, 2018).

⁷ This distinction, which is clear in the common law tradition, is more nuanced in the civil law tradition because of the meaning given to the term “charity” (Breen, 2020). Thus we use the term “charitable giving” to refer to the act of donating; and the term “nonprofit organization” to refer to a legal entity providing a social service.

(2006) highlights income levels together with the public and private benefits associated with the act of giving. Bekkers and Wiepking (2011) identify eight key mechanisms which have been studied as determinants of charitable giving: (a) awareness of need; (b) solicitation; (c) costs and benefits; (d) altruism; (e) reputation; (f) psychological benefits; (g) values; and (h) efficacy. More recently, Konrath and Handy (2018) underline six final factors in the motives to donate, namely: trust, altruism, social consciousness, tax benefits, egoism and financial constraints.

Although it is possible to observe the existence of different factors, the tax regime is cited in most studies. Exploring the role of the monetary and tax benefits derived from donating to nonprofit organizations in the US context, Auten et al. (2002) and Karlan and List (2007) conclude that tax incentives are not the main motivation for charitable giving, but they may raise the amount given. In this same context, James (2018) claims that tax benefits may be a motivational and socially acceptable form of donor benefit because they cost the charity nothing. A similar justification can also be found in Lin and Wang (2016). Therefore, tax conditions can be assumed to increase the volume of donations and diversify the revenue streams managed by nonprofit organizations.

Previous literature has focused on tax deductions and benefits (Yetman & Yetman, 2013), tax rates (Alm & Teles, 2018) and the taxpayer (DiRusso & Foster, 2016) as potential conditioning factors in the volume of charitable giving. However, we find that two issues have been overlooked: (a) lack of harmonization in taxes; and (b) requisites for acceding to a singular tax regime. Significant variability can be detected with respect to the first of these issues, even within the same country (Obach, 2010; Salido-Andres et al., 2019). Montero (2013) provides evidence of heterogeneous tax regimes in the United States, for instance, suggesting that the volume of charitable giving, and consequently the diversification of nonprofit revenue streams, could be linked to the specific regional tax regime. Similarly, some Mediterranean regions, such as South Tyrol in Italy and Navarre in Spain, have their own legal systems characterized by high degrees of autonomy. This study focuses on the tax codes for nonprofit organizations, while comparing two regions in Spain, Navarre and Aragon. In the case of Navarre, the legal framework for nonprofit organizations is contained in Regional Law 21/2019, while the tax regime is regulated by Regional Law 10/1996. In other Spanish regions, such as Aragon, in contrast, the legal framework is set out in Law 50/2002 and the tax regime for these entities is regulated by Law 49/2002. The content and requirements of the two sets of regulations are different.

As well as tax incentives for potential donors, tax codes usually stipulate nonprofit tax regulations, including requisites for acceding to a singular tax regime (Palacios, 2016). This is the case in other European countries, such as France and Germany. Accountability, initial endowment and auditing standards are some examples of tax regulations in the nonprofit tax codes, which could condition the volume of charitable donations through the more intense monitoring required by the special tax regime. Normative analysis of the Spanish regulation reveals regional variations in the requisites for access to a singular tax regime, which could in turn lead to differences between the above-mentioned regions when it comes to the monitoring, management and costs of these organizations. The Navarrese regulation (Arts. 42 and 43 Regional Law 21/2019) allows nonprofit organizations to conduct activities of collective interest, whereas the Spanish regulation only introduces the development of activities of general interest⁸ (Art. 3.1 Law 50/2002). This triggered the introduction of a different legal regime for nonprofit organizations in Navarre. When oriented towards collective interest objectives, these entities are able to function without

⁸ This difference has key implications. For instance, under the Navarrese regulation (Art. 43 Law 21/2019, previous Art. 47 Law 1/1973), if a nonprofit organization closes down, its assets revert to the heirs, which is not possible under the Spanish regulation because of the general interest (Art. 33 Law 50/2002).

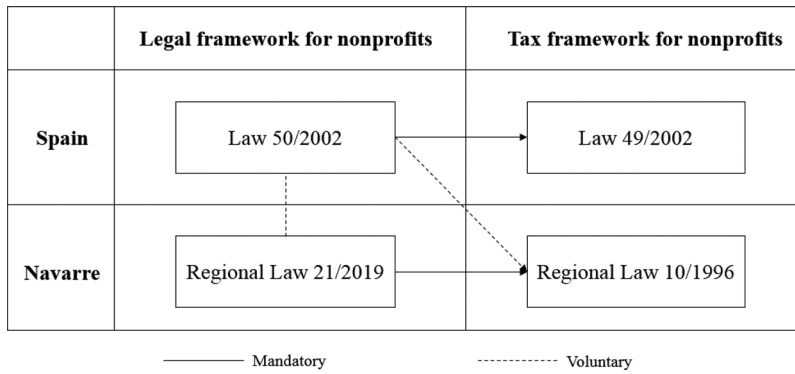


FIGURE 1 Relationship between regional and national tax and legal regulations for nonprofits

legal status (Art. 44 Regional Law 21/2019), and a compulsory minimum endowment (Art. 7.1 Regional Law 10/1996) and allowed to conduct commercial activities if they are considered to promote the collective interest. Moreover, not being a legal entity, they are not subject to public monitoring (D.A 1st Regional Law 10/1996), auditing (Art. 11.1 Regional Law 10/1996) and accountability obligations (Art. 11.4 Regional Law 10/1996). Additionally, the Government of Navarre promotes the creation of these organizations via socio-cultural patronage (D.A 10th Regional Law 10/1996). None of these options is available within the Spanish legal framework for nonprofit organizations, which requires full compliance with all of the above-mentioned obligations. These nonprofit tax regulations affect Navarrese nonprofits, which can choose between the two legal frameworks (regional and national) in order to accede to the tax framework contained in the Regional Law 10/1996. Figure 1 shows the interactions between legal regimes.

The unique configuration of the Navarre tax regime for nonprofit organizations has three main implications. The first is that nonprofits in the rest of Spain may be tempted to switch their domicile to Navarre in order to benefit from the Navarrese legal regime, which is more flexible and imposes fewer monitoring mechanisms. The second supposes that this tax configuration can affect the management of these entities and their costs associated with the tax regulation. Finally, Navarrese nonprofit organizations are able to go beyond their own legal framework and voluntarily adopt the more demanding requirements of Law 50/2002 and accede to the tax regime contained in Regional Law 10/1996 at the same time. However, if a nonprofit, settled in other region, is mandatorily ruled by Law 50/2002, it cannot accede to the singular tax regime contained in Regional Law 10/1996. Charitable giving is therefore conditioned by the tax regulation, which imposes monitoring mechanisms that could affect the performance of nonprofit organizations.

2.3 | Hypothesis

Tax regulations for nonprofit organizations could significantly affect their revenue structure by increasing the volume of charitable donations. The interaction between income sources and tax regulation can be explained under the resource dependence approach (Pfeffer & Salancik, 1978), which maintains that “the key to organizational survival is the ability to acquire and maintain resources”, to do so, “organizations must transact with other elements in their environment to acquire needed resources” (Pfeffer & Salancik, 1978, p. 2). High levels of income diversification will reduce the interdependence between a nonprofit organization and its environment. In this

respect, Tevel et al. (2015) evidence that the level of charitable donations has a positive impact in the revenue structure of Israeli nonprofit organizations, which they link to lower probability of financial distress. In this respect, López-Arceiz et al. (2017) present evidence from the Spanish context to show that revenue diversification through private funding can help to reduce dependence on government grants and rotation in the staff-to-volunteer ratio, thereby improving liquidity and access to market funding. Chang et al. (2018) shows that the diversification of revenue through charitable donations also improves the financial health of US nonprofit organizations. Similar findings had already been reported by Tuckman and Chang (1991) and Froelich (1999) who showed that diversification provides a means towards self-sufficiency, autonomy and independence. It also enables nonprofits to strengthen their interaction with the community and increase their legitimacy and social recognition (Bielefeld, 1992; Carroll & Stater, 2009; García & Romero, 2018).

However, the ability of a nonprofit organization to achieve greater income diversification will also be conditioned by its environment. According to the resource dependence theory, “organizations are constrained by the environment as a consequence of their resource needs” (Froelich, 1999). In terms of management and resource availability, therefore, these entities are conditioned by the social context (Froelich, 1999, p. 248). In this sense, Hillman et al. (2009, p. 1404) states that “this theory recognises the influence of external factors on organizational behaviour and, although constrained by the environment, managers can act to reduce uncertainty and dependence”. Tax regulations are part of the social context, which conditions the strategies and internal and external actions taken by organizations (Pfeffer & Salancik, 1978, p. 49). Consequently, flexibility in tax regulations will enable organizations to diversify their financial structure, reduce their dependence on resource providers and increase their chances of financial survival, whereas rigidity will reduce such possibilities.

Therefore, the structure of nonprofit setups will be determined by the impact of tax regulations on their resource dependence. Pfeffer and Salancik (1978, p. 108) address two possible explanatory factors for the dependence of an organization on its environment: (a) dependence on important critical resources exchanges; and (b) the control which other organizations might possess over the exchange of those resources. The first component of interdependence can be reduced through diversification via charitable giving. In the case of nonprofit organizations, the financial distress associated with their dependence on income sources is reduced via income diversification. This effect should be increased by the tax regulations in force in the specific social context in which nonprofit organizations operate. Additionally, the second factor, associated with the control of resource exchange by another organization, can be mitigated by means of cooptation; that is, inviting those who have control over the resources to participate in the organization. In this sense, some tax regime components, such as accountability, can significantly promote this participation, by opening channels of communication between the nonprofit organizations and its environment. Consequently, tax regulations are part of the external environment of nonprofit organizations, and, as such, define their general operating conditions and present regional differences. Nevertheless, we find a lack of research on the role of nonprofit tax regulations as a means to promote income diversification via charitable contributions. We therefore propose the following working hypothesis:

H₁: Nonprofit tax regulations have a significant positive moderating effect on the relationship between the level of revenue diversification and the financial distress of nonprofit organizations.

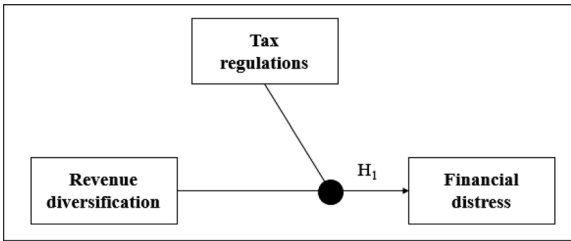


FIGURE 2 Theoretical model

The non-rejection of this hypothesis would imply that nonprofit tax regulations can increase the positive impact of revenue diversification on nonprofit organizations, such that the volume of charitable giving would increase for nonprofits fulfilling certain requirements laid out in their own tax regime. The rejection of H_1 , on the other hand, would mean that nonprofit tax regulations have no impact on the level of private donations, and that the promotion of tax incentives is a more efficient strategy for increasing revenue diversification and reducing levels of financial distress. Figure 2 illustrates the proposed theoretical model.

3 | METHODOLOGY

3.1 | Sample

The study population is a set of 707 active nonprofit organizations (DGA, 2017) domiciled in two Spanish regions, Aragon (387) and Navarre (320). These regions are located in northeastern Spain, and account for 3.1% and 1.7% of GDP, respectively (INE, 2020). The information for the analysis was drawn from the financial statements, activity reports, and financial budgets of these entities. The final sample comprises 406 nonprofit organizations with observations for a ten-year period from 2008 to 2018. The descriptive characteristics of the sample are detailed in Table 1.

The distribution of these entities, as shown, is Aragon: 74.5%; Navarre: 25.5%. In terms of age, the majority of the sample (79.9%) are recent creations. They can be classified as small entities due to the fact that they employ fewer than ten workers (67.1%). Their main fields of activity are social services (27.36%), culture (18.19%), education and research (16.53%) and local development (12.40%). Finally, we should note that nearly half of these entities (48.6%) were created by the collaboration among different types of organizations.

3.2 | Main variables

3.2.1 | Revenue diversification

To determine the level of revenue diversification, we consider four income sources: (a) private donations; (b) government funding; (c) commercial income; and (d) investment income (von Schnurbein & Fritz, 2017). Private donations may come from individuals, businesses, and/or other nonprofit organizations; while government funding includes public administration grants (Payne, 1998, p. 329). Commercial income refers to fees for services and product sales (Eikenberry & Kluver, 2004, p. 134). Finally, investment income is any revenue from financial instruments (Bowman et al., 2007).

TABLE 1 Sample characteristics

Characteristic	n	%
Region		
Aragon	325	74.5
Navarre	81	25.5
Age		
<1950	24	5.6
1950–1980	17	4.3
1981–2010	324	79.9
>2011	41	10.2
Number of workers		
Less than 10 workers	272	67.1
Between 10 and 50 workers	89	21.9
Between 51 and 250 workers	38	9.4
More than 250 workers	7	1.6
Activity		
Culture	74	18.19
Education and research	67	16.53
Health	13	3.15
Social services	111	27.36
Environment	10	2.52
Local development	50	12.40
Civil rights	11	2.75
Philanthropic intermediaries	5	1.15
International cooperation	8	2.06
Religious activities	7	1.83
Professional	7	1.60
Unknown	42	10.46
Type of funder		
Natural person	129	31.8
Private company	32	7.9
Third sector organization	43	10.5
Public administration	5	1.3
Mixture	197	48.6
Total	406	100

The analysis of the income structure of nonprofit organizations is based on the estimation of the Herfindahl-Hirschman Normalised Index (HHNI) [1] as a measure of revenue diversification (RD) (Frumpinkin & Keating, 2011; Chikoto & Neely, 2014; Qu, 2019):

$$HHNI = \frac{HHI - \frac{1}{n}}{1 - \frac{1}{n}}, \text{ with } HHI = \sum_{i=1}^n s_i^2 \quad (1)$$

where S_i is the i th share in the organization's total income sources ($i = 1$ for private donations, $i = 2$ for public funding, $i = 3$ for commercial income, and $i = 4$ for investment income). An HHNI of 1 indicates a concentrated revenue structure, while zero indicates a diversified revenue structure.

3.2.2 | Tax regulations

Most European countries have a two-faceted tax regulatory structure including both tax incentives to promote tax-deductible donations, and a specific tax regime for nonprofit organizations. Both of these facets result in a singular tax regime. Tax codes can also vary with the legal framework of each country. Spain has two tax regimes (regional and national) depending on the characteristics and history of each region. In Navarre, the tax regime for nonprofit organizations is contained in Regional Law 10/1996, while the one governing Aragon's nonprofits is contained in National Law 49/2002.

Although both tax regimes include provisions for nonprofit organizations, their specific characteristics differ substantially. To test the impact of the differences, we use a set of eight dummy variables to account for a statement of the organizational purpose, recognition as a legal entity, initial endowment, commercial activity, accountability, auditing, public monitoring and socio-cultural patronage. These are the variables according to which a nonprofit organization is licensed to operate under a specific tax regime (Law 49/2002, Regional Law 10/1996). The choice of variables is based on those proposed by Toepler (2018) and Rey-Garcia (2018, 2020) as key indicators for comparing tax regimes. These dummies take the value 1 for organizations operating under the national tax regime for nonprofits and 0, otherwise. It is important to note that the national tax regime for these organizations is more stringent than the regional one. As a result, some Navarrese nonprofit organizations may voluntarily exceed regional regulations in some respects. A description of the dummy variables is given in Appendix I.

3.2.3 | Financial distress

Tuckman and Chang (1991) developed a theory to evaluate financial distress in nonprofit organizations. Greenlee and Trussel (2000) updated this proposal with a model specification that can be used to predict such financial vulnerability. This model is based on four indicators:

- Equity = (Total equity/Total revenue).
- Concentration = $(\sum(\text{Revenue source}_i/\text{Total revenue})^2)$ - Concen -.
- Administrative expenses = (Administrative expenses/Total revenue) - Admin -.
- Margin = $((\text{Total revenue} - \text{Total expenses})/\text{Total revenue})$.

Expression (2) gives the specification of this model:

$$\text{Probability of financial distress (PFD1)} = \frac{1}{1 + e^{-Z1}} \quad (2)$$

where:

$$Z1 = -3.0610 + 0.1153 * \text{Equity} + 1.2528 * \text{Concen} - 2.2639 * \text{Admin} - 3.4289 * \text{Margin}$$

The decision rule associated with this model is based on the probability of financial distress (PFD1). Thus, with $\text{Prob}(\text{PFD1}) > 0.10$, there is a strong indication of financial vulnerability, whereas with $\text{Prob}(\text{PFD1}) < 0.07$, there is a strong indication of no financial vulnerability. With values between 0.07 and 0.10, the result is inconclusive, as there is no strong indication either way.

This model is tested in the US setting, where the structure of nonprofit organizations may differ from other countries. Although the term equity was not significant, the relevance of this factor in Spanish nonprofits recommends its use (Fernández 2008; Calabrese, 2020). Nevertheless, we complete our analysis with the proposal of Trussel et al. (2002), which we denote by Z2 while computing the probability of financial distress (PFD2) as follows:

$$\text{PFD2} = \frac{1}{1 + e^{-Z2}} \quad (3)$$

where:

$$\begin{aligned} Z2 = & 0.7754 + 0.9272 * \text{Debt} + 0.1496 * \text{Concen} + 0.1206 * \text{Admin} \\ & - 2.8419 * \text{Margin} - 0.1665 * \text{Size} \end{aligned}$$

and

- Debt = (Total liabilities/Total assets).
- Concentration = $(\sum(\text{Revenue source}_i/\text{Total revenue})^2) - \text{Concen}$.
- Administrative expenses = (Administrative expenses/Total revenue) - Admin.
- Margin = $((\text{Total revenue} - \text{Total expenses})/\text{Total revenue})$.
- Size = Natural log of total assets.

The decision rule associated with this model is similar to the previous one (PFD2), the only difference being the sum of the debt ratio and the size of the organization.

Finally, we also estimate the level of financial distress under the De-Andres et al. (2016) proposal, which uses three dimensions to assess the financial vulnerability of a nonprofit organization: operational vulnerability (variation of net assets over time), leverage vulnerability (ratio of total assets to debt) and liquidity vulnerability (ratio of current assets to short-term liabilities). According to De-Andres et al. (2016, p. 2548), an entity is considered operationally vulnerable when its net assets are decreasing from year to year. Leverage vulnerability is associated with the idea of “technical insolvency”, or the ability of an entity to meet its debt. Finally, liquidity vulnerability measures the short-term capacity of the nonprofit to pay its debts. If an entity classifies as vulnerable in one dimension only, its financial risk is low, although this risk increases as more dimensions of financial vulnerability are affected. Meanwhile, a nonprofit testing as non-vulnerable in these dimensions is considered to be financially healthy. It should be noted that this proposal is specific to the Spanish context, assuming some evolution with respect to the models described above (Jimeno et al., 2020).

3.2.4 | Control variables

Control variables are included to capture the promoter (founder), size of organization, and sector of activity. Five promoter categories are considered: (a) individuals; (b) private companies; (c) third sector organizations; (d) public administrations; and (e) combinations of the above. The level of revenue diversification is expected to vary with some types of promoter, given that there are tax incentives associated with private founders (Weinryb, 2020). Moreover, those organizations in the larger size categories will be able to obtain higher levels of revenue diversification (Chang & Tuckman, 2010). Finally, the sector of activity is included because the patronage deductions allowed for some sectors could serve to enable revenue diversification (Dehne et al., 2008).

3.3 | Statistical techniques

We start with a descriptive analysis of the different indicators followed by a t -test of mean differences and the Mann-Whitney U test to assess the differences on revenue diversification and financial distress between regional and national tax regimes. After computing the correlation matrix, we test for differences between the tax regulations. For this, we use a regression discontinuity design to evaluate the outcome variable (financial distress) in two groups of nonprofits (Navarrese and Aragonese) taking the specific tax regulation as the treatment variable. This will reveal any differences in financial distress levels between the two regions' nonprofit organizations and include the effect of the specific tax regulation on their respective income diversification levels. The regression discontinuity design is based specifically on the assumption that unobserved characteristics vary around the cut-off point, while the observable characteristic is used to determine the treatment (Hahn et al., 2001). In this case, we consider the tax regulation as an observable characteristic to explain what is happening around the cut-off point, which represents the difference between Navarrese and Aragonese nonprofit organizations.

Additionally, we specify a set of panel regressions. Two analyses are performed in order to study possible differences between the above-mentioned regions. We first specify a regression model using the Hausman–Taylor (1981) estimator considering the tax regulation (TR_{it}) as time-invariant (Baltagi & Kahnti-Akom, 1990). The model specification is given by equation (4):

$$FD_{it} = \alpha_1 RD_{it} + \alpha_2 TR_{it} + \alpha_3 TR_{it} \times RD_{it} + \beta_i Control_{it} + \mu_{it} \quad (4)$$

where FD_{it} denotes the financial distress indicators, and the subscripts i and t denote organization and year, respectively. The exogenous variables are denoted by RD_{it} and TR_{it} ; the former for the revenue diversification level and the latter for the various tax regulations represented by the dummy variables. The term $TR_{it} \times RD_{it}$ denotes the interaction effect between revenue diversification and tax regulations. $Control_{it}$ denotes the control variables, and μ_{it} the random noise. The α parameters enable us to test the proposed working hypotheses.

Next, we implement an instrumental variable approach, using the specification given by expression (5):

$$FD_{it} = \alpha_1 RD_{it} + \alpha_2 Navarre_i + \beta_i Control_{it} + \mu_{it} \quad (5)$$

where the variable *Navarre* is instrumentalized based on the following expression:

$$Navarre_i = \alpha_i * \sum_{n=1}^8 TR_{ni} + \varepsilon_i \quad (6)$$

It can be seen that the instrumentalization is achieved by using the specific tax regulation (TR_{ni}) as a proxy for the region under analysis. The term FD_{it} denotes the financial distress indicators; $Navarre_i$ refers to the dummy variable used to identify this region; $Control_{it}$ denotes the control variables; and μ_{it} and ε_i are the random noise components. We use a two step (2SLS) estimator, assuming random effects because of the exogenous dummy variables. The object of both specifications is to establish relationships between financial distress, revenue diversification, tax regulations and the control variables.

Finally, we run a differences-in-differences (diff-in-diff) analysis to enhance the robustness of our analysis. This is a quasi-experimental technique which relies on the panel structure of the data and enables the inclusion of time-invariant characteristics (Bharadwaj, 2010). Stata 16.0 and SPSS 27.0 software are used for the data analysis.

4 | RESULTS

Table 2 shows the main descriptive statistics for the full sample and the two subsamples, Aragon and Navarre-based nonprofit organizations. In all cases, we show both the balance sheet and the income statement together with the revenue diversification and financial distress indicators. The last two columns report the *t*-test and Mann-Whitney *U* significance values.

The first section of the table reveals significant differences in the main balance sheet and income statement items between the two legal frameworks (*p* value < 0.100), whether defined parametrically or non-parametrically. Specifically, all the variables considered show higher values on average for Navarrese than for Aragonese organizations. In the second section of the table, the focus shifts from the raw data to the revenue source ratios and the HHNI revenue diversification values. Navarre's nonprofit organizations show higher ratios of public grants than those of Aragon, while the reverse difference is found for the other three sources. The HHNI revenue concentration values reveal lower revenue diversification in Aragonese organizations. The third section of the table displays the values of the financial distress measures. The scores on the financial vulnerability measurements proposed by Greenlee and Trussel (2000) and Trussel et al. (2002) show that Aragon's nonprofits have a higher level of financial distress than those of Navarre, but, at less than 10%, it is not indicative of financial vulnerability according to these authors. The values of the ratios developed by De-Andres et al. (2016) are controversial. The Navarrese nonprofits show higher operational vulnerability, measured as the variation of net assets over time, whereas those of Aragon show leverage and liquidity vulnerability according to the observed values.

Table 3 shows the correlation matrices for the full sample and the two subsamples. The results for the full sample reveal a negative relationship between the probability of financial distress and private donations (PFD1: -0.147; PFD2: -0.077), public grants (PFD1: -0.139; PFD2: -0.144) and commercial revenue (PFD1: -0.069; PFD2: -0.026), and a positive relationship between the probability of financial distress and investment income (PFD1: 0.504; PFD2: 0.349). They also show that higher revenue concentration is positively associated with the probability of default (PFD1: 0.161; PFD2: 0.162). A positive relationship is found for both leverage (PFD1: 0.123; PFD2: 0.079) and liq-

TABLE 2 Descriptive statistics

Variable	Sample			Navarre			Aragon			Test				
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	t	U
Total assets (TEUR)	2,952.78	16,552.68	0.00	304,472.00	9,713.84	37,667.82	0.00	304,472.00	1,692.84	7,152.89	0.00	16,065.98	***	***
Current assets (TEUR)	687.12	2,579.70	0.00	41,215.00	1,864.89	5,630.71	0.00	41,215.00	467.02	1,296.14	0.00	15,916.64	***	***
Total liabilities (TEUR)	572.08	2,499.34	0.00	50,111.85	1,263.70	4,243.58	0.00	50,111.85	442.10	1,984.42	0.00	41,709.86	***	***
Current liability (TEUR)	294.17	1,003.38	0.00	13,397.77	631.16	1,464.48	0.00	11,652,227.12	230.84	876.68	0.00	13,397.77	***	***
Total equity (TEUR)	2,386.37	16,000.23	-11,759.18	299,736.00	8,480.45	37,019.38	-11,759.18	299,736.00	1,250.74	6,381.85	-30.00	160,093.69	***	***
Total income (TEUR)	870.72	2,065.61	0.00	23,009.39	2,103.33	3,105.39	0.00	22,805,636.46	615.92	1,667.49	0.00	23,009.39	***	***
Private donations (TEUR)	288.70	1,090.86	0.00	18,520.97	487.62	1,269.99	0.00	7,006,855.00	247.48	1,045.58	0.00	18,520.97	***	***
Public grants (TEUR)	354.95	1,093.44	0.00	15,990.76	1,065.09	2,038.04	0.00	15,990.76	208.16	678.33	0.00	10,841.01	***	***
Commercial income (TEUR)	214.62	902.46	0.00	13,445.97	514.11	1,460.43	0.00	11,575,000.00	152.55	720.92	0.00	13,445.97	***	***
Income from investments (TEUR)	12.36	73.35	0.00	1,317.00	34.73	152.01	0.00	1,317.00	7.73	39.90	0.00	1,127.80	***	-
Private donations share	0.2707	0.3769	0.00	1.00	0.2274	0.3282	0.00	1.00	0.2800	0.3863	0.00	1.00	***	-
Public grants share	0.4143	0.3995	0.00	1.00	0.5521	0.3446	0.00	1.00	0.3841	0.4044	0.00	1.00	***	***

(Continues)

TABLE 2 (Continued)

Variable	Sample			Navarre			Aragon			Test				
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	t	U
Commercial income share	0.2179	0.3401	0.00	1.00	0.2037	0.2803	0.00	1.00	0.2210	0.3518	0.00	1.00	-	***
Income from investments share	0.0972	0.2735	0.00	1.00	0.0168	0.0871	0.00	1.00	0.1149	0.2964	0.00	1.00	***	***
H-H Normalized Index	0.7933	0.2089	0.30	1.00	0.7094	0.2031	0.33	1.00	0.8117	0.2058	0.30	1.00	***	***
Probability of financial distress (PFD1)	0.0489	0.2011	0.00	1.00	0.0127	0.1061	0.00	1.00	0.0561	0.2143	0.00	1.00	***	***
Probability of financial distress (PFD2)	0.0802	0.2041	0.00	1.00	0.0400	0.1065	0.00	1.00	0.0881	0.2173	0.00	1.00	***	***
Operational vulnerability (TEUR)	154.14	7,789.24	-148.23	271.84	418.83	13,372.63	-148,233.43	271,835.00	59.89	4,316.20	-96,398.10	143,515.15	-	***
Leverage vulnerability	1,167.49	26,587.16	-104,950.47	873,092.74	27.11	286.06	-2,005.58	4,491.89	1,406.79	29,239.56	-104,950.47	873,092.74	**	***

(Continues)

TABLE 2 (Continued)

Variable	Sample			Navarre			Aragon			Test				
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	t	U
Liquidity vulnerability	823.49	20,436.40	-23,388.96	714,428.00	16.56	226.93	-290.88	4,150.56	995.28	22,504.11	-23,388.96	714,428.00	*	***

***p value < 0.010, **p value < 0.050, *p value < 0.100; TEUR: Thousand euros.

TABLE 3 Correlation matrix

Panel A. Sample									
Variable	1	2	3	4	5	6	7	8	9
1 Private donations share									
2 Public grants share	-0.482 ^{***}								
3 Commercial income share	-0.362 ^{***}	-0.385 ^{***}							
4 Income from investments share	-0.224 ^{***}	-0.318 ^{***}	-0.185 ^{***}						
5 H-H Normalized Index	-0.069 ^{***}	0.015	-0.092 ^{***}	0.188 ^{***}					
6 PFD1	-0.147 ^{***}	-0.139 ^{***}	-0.069 ^{***}	0.504 ^{***}	0.161 ^{***}				
7 PFD2	-0.077 ^{***}	-0.144 ^{***}	-0.026	0.349 ^{***}	0.162 ^{***}	0.342 ^{***}			
8 Operational vulnerability	-0.014	-0.001	0.013	0.004	-0.032	0.028	-0.025		
9 Leverage vulnerability	-0.029	-0.035	0.014	0.086 ^{***}	0.022	0.123 ^{***}	0.079 ^{***}	-0.001	
10 Liquidity vulnerability	-0.028	-0.038 [*]	0.024	0.078 ^{***}	0.027	0.075 ^{***}	0.053 ^{***}	-0.001	0.945 ^{***}
Panel B. Navarre									
Variable	1	2	3	4	5	6	7	8	9
1 Private donations share									
2 Public grants share	-0.634 ^{***}								
3 Commercial income share	-0.356 ^{***}	-0.458 ^{***}							
4 Income from investments share	-0.114 ^{**}	-0.092 [*]	-0.064						
5 H-H Normalized Index	-0.026	0.239 ^{***}	-0.267 ^{***}	0.011					
6 PFD1	-0.059	0.117 ^{**}	-0.078	-0.008	0.093 [*]				
7 PFD2	0.05	-0.121 ^{**}	-0.102 [*]	0.539 ^{***}	0.063	-0.040			
8 Operational vulnerability	-0.058	-0.017	0.063	0.100 ^{**}	0.009	0.209 ^{***}	-0.032		
9 Leverage vulnerability	-0.006	0.028	-0.031	0.007	0.063	0.282 ^{***}	-0.028	0.058	

(Continues)

TABLE 3 (Continued)

Panel B. Navarre									
Variable	1	2	3	4	5	6	7	8	9
Liquidity vulnerability	-0.033	0.055	-0.036	0.019	0.061	-0.008	-0.021	-0.004	0.881***
Panel C. Aragon									
Variable	1	2	3	4	5	6	7	8	9
Private donations share									
Public grants share	-0.456***								
Commercial income share	-0.365***	-0.376***							
Income from investments share	-0.248***	-0.323***	-0.199***						
H-H Normalized Index	-0.091***	0.011	-0.069***	0.185***					
PFD1	-0.162***	-0.148***	-0.072***	0.513***	0.159***				
PFD2	-0.096***	-0.134***	-0.025	0.337***	0.161***	0.352***			
Operational vulnerability	0.024	-0.019	-0.013	0.010	-0.051***	-0.020	-0.025		
Leverage vulnerability	-0.033	-0.034	0.014	0.085***	0.021	0.127***	0.079***	0.000	
Liquidity vulnerability	-0.032	-0.038	0.024	0.077***	0.027	0.077***	0.052***	0.000	0.945***

***p value < 0.010; .

**p value < 0.050; .

*p value < 0.100; PFD1: Probability of financial distress (Z1); PFD2: Probability of financial distress (Z2).

uidity (PFD1: 0.075; PFD2: 0.053) vulnerability and probability of financial distress. Notably, most of the results for the full sample also hold for the Aragon subsample, while some variations are found for Navarre nonprofits. This result could bear some relation to the fact that the tax regime alters the effect of revenue diversification on the probability of financial distress.

To explore the origin of the observed differences, we test for mean differences in the revenue diversification index and the financial distress measures attributable to the eight tax regulation requirements (Table 4). These are organizational purpose, recognition as a legal entity, initial endowment, commercial activity, accountability, auditing, public monitoring and socio-cultural patronage. The general observation is that the revenue diversification indicator varies with the tax regulation requirements, except for the organizational purpose, which only affects public grants and commercial revenue shares. With respect to the probability of financial distress, the main differences relate to the initial endowment, auditing and public monitoring requirements, while other regulatory conditions, such as recognition as a legal entity and socio-cultural patronage, show a less intense relationship with financial distress in nonprofits. These results evidence the fact that specific tax regulations for nonprofit organizations do have an impact on revenue diversification and financial distress levels. Thus, in Navarre, where the legal framework is more flexible, especially with respect to the initial endowment, engagement in commercial activity and accountability and public monitoring requirements, we observe lower probability of financial distress, followed by higher levels of revenue diversification.

We complete this analysis by implementing the regression discontinuity design. Figure 3 shows the points of differentiation between Navarrese and Aragonese nonprofit organizations. The dependent variable (PFD1) is plotted on the y-axis, while the x-axis indicates the level of income diversification moderated by the tax regulation, which serves as the treatment variable.⁹

Regression discontinuity design. Cut-off: Aragon vs. Navarre

The results provide evidence of differences between Navarrese and Aragonese nonprofit organizations. In general terms, the Aragonese nonprofits show higher levels of financial distress which can be explained by various factors relating to tax regulation requirements; in particular, the organizational purpose, recognition as a legal entity, initial endowment, commercial activity, accountability, auditing and public monitoring. This is consistent with the results of the difference of means test. These preliminary findings are subsequently tested through panel regressions where the cut-off point is considered as a dummy variable representing the specific tax regulation.

Table 5 shows the results for the estimation of the models in which the level of financial distress is regressed on revenue diversification, while controlling for size, type of promoter (founder) and activity. For the full sample, we observe a significant effect of revenue diversification on the probability of financial distress as per the indicators developed by Greenlee and Trussel (2000) and Trussel et al. (2002). Specifically, the probability of financial distress increases with higher revenue concentration. In two of the three models estimated, we can also appreciate a reduction in the probability of financial distress if the founder is the public administration. When splitting the sample into the two subsamples, these effects disappear for the Navarre organizations, but persist for those in Aragon. The location of the nonprofit is therefore a relevant factor in this relationship. However, this finding may be due to the nature of the nonprofit tax regulations moderating the effect of revenue diversification.

Having analysed the effects of revenue diversification on financial distress for the two locations, we wish to study the moderating effect of the nonprofit tax regulations in this relationship

⁹The graphs for PFD2, operational vulnerability, leverage vulnerability and liquidity vulnerability are available upon request.

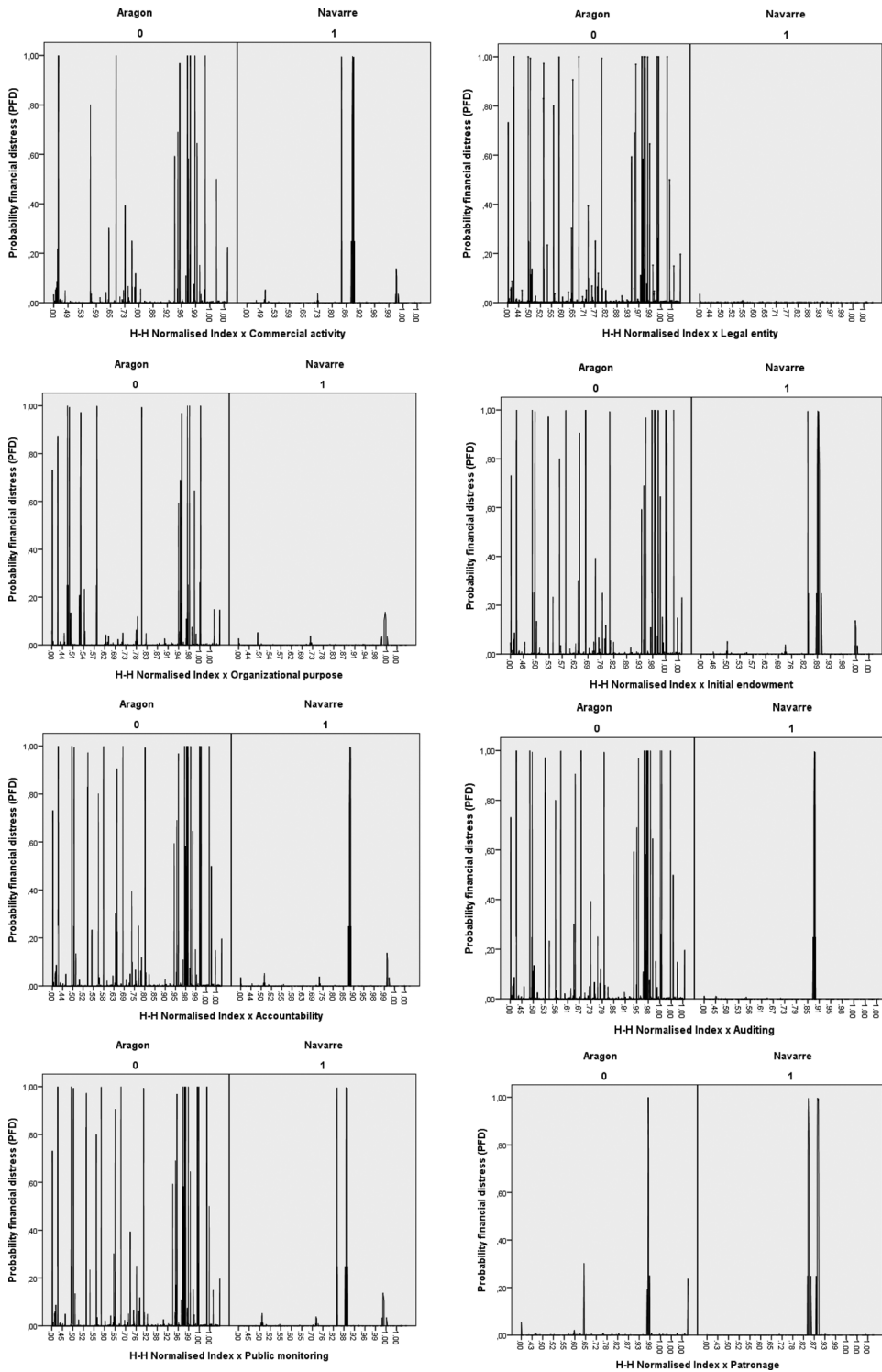


FIGURE 3 Regression discontinuity design. Cut-off: Aragon vs. Navarre

TABLE 4 Mean test common vs. regional tax regulation

Variable	Organizational purpose			Legal entity			Initial endowment			Commercial activity			
	Collective (0)	General (1) t	U	No (0)	Yes (1) t	U	No (0)	Yes (1) t	U	>30% (0)	<30% (1) t	U	
Private donations share	0.262	0.280	-	0.176	0.278	***	0.248	0.276	-	***	0.046	0.349	***
Public grants share	0.435	0.390	***	0.584	0.401	***	0.465	0.399	***	**	0.193	0.492	***
Commercial income share	0.202	0.235	**	0.211	0.217	-	0.224	0.212	-	***	0.743	0.033	***
Income from investments share	0.099	0.094	-	0.027	0.102	***	0.063	0.112	***	***	0.018	0.125	***
H-H Normalized Index	0.790	0.796	-	0.738	0.797	***	0.858	0.772	***	***	0.718	0.820	***
PFD1	0.055	0.041	*	0.032	0.050	-	0.043	0.051	-	***	0.028	0.056	***
PFD2	0.082	0.077	-	0.029	0.083	***	0.181	0.045	***	***	0.069	0.084	*
Operational vulnerability	272,665.22	37,110.41	-	243,813.83	145,167.40	-	-1,737.46	771,546.34	***	***	611,836.19	547,519.53	-

(Continues)

TABLE 4 (Continued)

Variable	Organizational purpose			Legal entity			Initial endowment			Commercial activity							
	General (0)	(1) t	U	No (0)	Yes (1)	t	U	No (0)	Yes (1)	t	U	>30% (0)	<30% (1)	t	U		
Leverage vulnerability	1,735.12	544.08	-	70.30	1,248.98	-	-	1,473.79	1,062.78	-	-	1,857.80	937.83	-	-	-	
Liquidity vulnerability	1,300.85	289.24	-	40.03	882.84	-	-	1,486.83	596.61	-	-	1,449.06	613.42	-	-	-	
Accountability																	
Variable	No (0)	Yes (1)	t	U	No (0)	Yes (1)	t	U	No (0)	Yes (1)	t	U	No (0)	Yes (1)	t	U	
	0.198	0.273	*	-	0.222	0.276	**	*	0.174	0.277	***	***	***	0.282	0.223	***	*
Private donations share																	
Public grants share	0.583	0.409	***	***	0.520	0.401	***	***	0.546	0.405	***	***	0.388	0.526	***	***	***
Commercial income share	0.189	0.219	-	-	0.239	0.216	-	***	0.255	0.215	-	***	0.226	0.183	**	*	*
Income from investments share	0.029	0.099	***	-	0.019	0.107	***	***	0.025	0.102	***	*	0.104	0.068	***	***	***
H-H Normalized Index	0.755	0.795	*	**	0.725	0.802	***	***	0.748	0.796	***	***	0.795	0.787	-	-	-
PFD1	0.036	0.049	-	-	0.012	0.053	***	***	0.001	0.052	***	**	0.049	0.051	-	-	-
PFD2	0.065	0.081	-	-	0.049	0.084	***	***	0.033	0.083	***	***	0.078	0.093	-	-	***
Operational vulnerability	169,041.93	151,331.65	-	*	1,818,397.72	152,942.85	**	***	194,962.81	149,578.38	-	**	147,888.04	176,414.49	-	-	-
Leverage vulnerability	26.29	1,201.98	-	**	33.73	1,294.00	*	***	60.47	1,235.84	-	-	1,322.97	462.30	-	-	-
Liquidity vulnerability	4.37	848.56	-	**	25.76	913.69	*	**	45.56	871.68	-	-	946.26	259.03	-	-	***

***p value < 0.010; .

**p value < 0.050; .

*p value < 0.100; PFD1: Probability of financial distress (Z1); PFD2: Probability of financial distress (Z2).

TABLE 5 Regression results

Panel A. H-H Normalized Index					
Variable	PFD1	PFD2	Operational vulnerabil- ity	Leverage vulnerabil- ity	Liquidity vulnerabil- ity
H-H Normalized Index	0.092***	0.094***	0.147	-0.013	-0.048
Size	-0.013	-0.050***	0.112	-0.081	-0.088
Natural person	0.018	-0.038**	0.036	0.028	0.049
Private company	0.048	0.068	0.152	0.015	-0.009
Third sector organization	-0.001	0.011	-0.004	0.279	0.222
Public adminis- tration	-0.051**	-0.082**	-0.003	-0.085	-0.095
Social services	0.002	0.005	-0.159**	0.024	-0.009
Culture	-0.001	0.006	-0.069	-0.055	-0.089
Education and research	0.001	0.008	-0.131*	-0.024	-0.072
Local development	0.118	0.025	0.059	-0.177	-0.216
Prob > χ^2	0.000	0.000	0.271	0.318	0.369
Panel B. Navarre					
Variable	PFD1	PFD2	Operational vulnerabil- ity	Leverage vulnerabil- ity	Liquidity vulnerabil- ity
H-H Normalized Index	0.007	0.005	0.291	0.001	-0.001
Size	-0.001	-0.009	0.169	0.001	0.001
Natural person	-0.013	0.035	-0.127	0.020	0.022
Private company	-0.013	-0.012	-0.154	-0.001	-0.001
Third sector organization	-0.012	0.003	-0.115	0.001	-0.001
Public adminis- tration	-0.009	-0.013	-0.034	-0.001	-0.001
Social services	-0.003	-0.018	-0.130	-0.001	-0.001
Culture	0.068	0.045	0.138	-0.002	-0.002
Education and research	0.019	-0.031	0.139	-0.008	-0.009
Local development	0.059	0.046	0.106	-0.015	-0.157
Prob > χ^2	0.933	0.000	0.004	0.000	0.000

(Continues)

TABLE 5 (Continued)

Panel C. Aragon					
Variable	PFD1	PFD2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability
H-H Normalized Index	0.010***	0.105***	-0.025	-0.027	-0.065
Size	-0.016	-0.053***	0.109	-0.100	-0.107
Natural person	0.019	-0.043**	0.071	0.032	0.053
Private company	0.068	0.084	0.276	0.002	-0.027
Third sector organization	0.023	0.008	-0.009	0.565	0.438
Public adminis- tration	-0.046**	-0.050**	-0.001	-0.035	-0.026
Social services	0.002	0.036	-0.196	0.050	0.018
Culture	-0.017	0.018	-0.148	-0.047	-0.082
Education and research	-0.002	0.033	-0.174	0.007	-0.043
Local development	0.111	0.035	0.014	-0.176	-0.215
Prob > χ^2	0.000	0.000	0.864	0.651	0.695

***p value < 0.010; .

**p value < 0.050; .

*p value < 0.100; PFD1: Probability of financial distress (Z1); PFD2: Probability of financial distress (Z2).

(H₁). Table 6 presents the results of the estimation of the model given by expression (5) including the values of the revenue diversification indicator, and all five financial distress measures considered. The results in general show that, as revenue diversification increases, financial distress is reduced, and a moderating effect is found for the different tax regulations. For nonprofits promoting a general interest purpose, those officially recognized as legal entities, those complying with an initial endowment requirement and those with a ratio of commercial activity below 30%, the moderating effect on financial distress is negative; in other words, it is reduced. For nonprofits in socio-cultural patronage systems, the negative moderating effect on financial distress is found only when using the three measures developed by De-Andres et al. (2016). The results for the remaining tax regime requirements are less conclusive, although it is possible to observe that higher levels of accountability, mandatory auditing and public monitoring reduce operational vulnerability. We also observe a general negative effect of size and public administration promoter (founder) on financial distress; whereas the probability of financial distress and levels of financial vulnerability increase when the founder is a private individual or a private company. This effect is also present in certain sectors of activity, such as social services, education and research, and local development.

Consequently, the results show that certain tax regulation requirements, in combination with the income mix of the nonprofit organization, lower the probability of financial distress. However, the results are inconclusive for financial vulnerability, which decreases with some tax requirements, but not all. To analyse the global effect of the tax regulation implemented in Navarre, Table 7 presents the results of the instrumental variable approach.

TABLE 6 Regression results. Moderating effects

Variable	PFD1	PFD2	Operational leverage vulnerability	Liquidity vulnerability	PFD1	PFD2	Operational leverage vulnerability	Liquidity vulnerability	PFD1	PFD2	Operational leverage vulnerability	Liquidity vulnerability
H-H Normalized Index	0.164***	0.234**	0.017	0.508**	0.219*	0.592***	-1.465***	0.965***	1.089			
Organizational purpose												
H-H Normalized Index × Organizational purpose	0.069**	0.107***	-0.015	0.402**	0.211**							
H-H Normalized Index × Organizational purpose	-0.109**	-0.108***	0.015	-0.515***	-0.319***							
Legal entity												
H-H Normalized Index × Legal entity	0.084	0.515*	-1.349***	0.989*	1.027*							
H-H Normalized Index × Legal entity	-0.109	-0.469***	1.691***	-0.791***	-1.012							
Size	-0.008***	-0.013***	0.006	-0.037***	-0.012*	-0.041**	0.122***	-0.095*	-0.088*			
Natural person	0.029***	-0.001	-0.011	0.065***	0.027**	-0.028	0.028	0.024***	0.053***			
Private company	0.064**	0.112**	0.134	0.068***	0.060**	0.103***	0.136	0.094***	0.049			
Third sector organization	0.129	0.023***	0.069	0.304	0.015	0.079***	-0.035***	0.475	0.354			
Public administration	-0.044**	-0.032***	-0.040	-0.042***	-0.055***	-0.059**	0.144**	-0.009	-0.084			
Social services	0.022***	0.029	-0.102	0.063*	0.023***	0.026	-0.158***	0.094	0.039			
Culture	0.021	0.047***	-0.056*	0.003	0.019	0.024***	-0.068	-0.012	-0.056***			
Education and research	0.019	0.035**	-0.077**	0.022	0.021	0.025	-0.118***	0.033	-0.034			
Local development	0.152***	0.115**	-0.099	-0.045***	0.141***	0.0494*	0.046***	-0.161***	-0.188***			
Prob > χ^2	0.036	0.012	0.986	0.269	0.027	0.059	0.000	0.127	0.119			

(Continues)

TABLE 6 (Continued)

Variable	PFD1	PFD2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability	PFD1	PFD2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability
H-H Normalized Index	0.1524***	0.337***	-0.242***	0.132***	0.045***	0.005	0.184***	0.418	0.177***	0.262***
Initial endowment	0.054**	0.157*	-0.396*	-0.156***	-0.163***					
H-H Normalized Index x Initial endowment	-0.047**	-0.242***	0.425	0.256***	0.254***					
Commercial activity										
H-H Normalized Index x Commercial activity						-0.112***	-0.006***	0.578	-0.309**	-0.065
H-H Normalized Index x Commercial activity						0.178***	0.035***	-0.688	0.280**	-0.031
Size	-0.009***	-0.016*	0.026***	-0.169***	-0.007***	-0.001***	-0.011***	-0.019	-0.014***	-0.014***
Natural person	0.029***	-0.009	0.003	0.076***	0.105***	0.004***	-0.001	-0.019	0.079***	0.104***
Private company	0.063*	0.095**	0.146	0.070***	0.042***	0.068**	0.108***	0.123	0.071***	0.038**
Third sector organization	0.011	0.016	0.067***	0.274	0.190	0.009	0.017***	0.086	0.285	0.208
Public administration	-0.038***	-0.035***	-0.049	-0.031***	-0.034***	-0.044***	-0.036***	-0.009	-0.023**	-0.016**
Social services	0.023***	0.026	-0.102***	0.059***	-0.003	0.029***	0.032	-0.111	0.077***	0.011
Culture	0.022	0.037***	-0.055	-0.001	-0.055	0.024	0.047***	-0.058***	0.010	-0.044
Education and research	0.022***	0.029*	-0.075	0.021	-0.055***	0.029***	0.038**	-0.081	0.028	-0.052***
Local development	0.152***	0.026	-0.087*	-0.011	-0.044***	0.166***	0.126***	-0.119	-0.033***	-0.084***
Prob > χ^2	0.000	0.076	0.000	0.287	0.326	0.000	0.006	0.463	0.311	0.328

(Continues)

TABLE 6 (Continued)

Variable	PFDI	PF2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability	PF2	PF1	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability
H-H Normalized Index	0.179*	0.598	-0.686***	0.954	0.921	0.431	0.124	-0.376***	0.719	0.705
Accountability	0.061	0.363	-1.451***	0.607	0.651					
H-H Normalized Index × Accountability	-0.067	-0.477	0.844**	-0.742	-0.804					
Auditing										
H-H Normalized Index × Auditing						0.243	0.019	-1.338***	0.438	0.499
						-0.298	-0.005	0.565**	-0.503	-0.591
Size	-0.010	-0.031	-0.112***	-0.068	-0.061	-0.024	-0.007	0.093***	-0.054	-0.049
Natural person	0.028***	-0.022	0.049*	0.047***	0.072***	-0.012	0.030***	0.039***	0.054***	0.079***
Private company	0.060**	0.085***	0.151**	0.051**	0.022	0.098***	0.065**	0.054***	0.061***	0.031
Third sector organization	0.012	0.008	-0.073	0.320	0.237	0.024	0.018	-0.320	0.334	0.250
Public administration	-0.042***	-0.071**	-0.112***	-0.055***	-0.064***	-0.035	-0.030***	-0.481***	0.002	-0.006
Social services	0.020***	0.011	-0.066	0.084	0.023	0.019	0.021***	-0.018	0.073	0.014
Culture	0.018	0.018	-0.105	0.002	-0.052***	0.034***	0.020	-0.005	0.003	-0.049***
Education and research	0.019***	0.014	-0.139***	0.035	-0.039	0.024**	0.021***	-0.011	0.029	-0.045
Local development	0.142***	0.063	0.089	-0.106***	-0.143***	0.087*	0.147***	0.164	-0.091***	-0.129**
Prob > χ^2	0.103	0.226	0.014	0.388	0.379	0.265	0.255	0.044	0.545	0.494

(Continues)

TABLE 6 (Continued)

Variable	PFD1	PFD2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability	PFD1	PFD2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability
Normalized Index	0.116	0.460**	-1.414***	0.786***	0.871*	0.114***	0.205***	0.117	0.330***	0.226***
Public monitoring	0.067	0.462	-1.041***	0.877	0.907					
Normalized Index × Public monitoring	0.001	-0.330	1.633***	-0.594**	-0.778*					
Patronage										
Normalized Index × Patron-age						-0.0189	0.146***	0.606**	0.209***	0.074***
H-H						0.0500	-0.113*	-0.746***	-0.264***	-0.125***
Size	-0.010	-0.039	0.080***	-0.084	-0.077	-0.007***	-0.012**	0.001	-0.026***	-0.016***
Natural person	0.031***	-0.011	0.018	0.051**	0.075***	0.035***	0.007	-0.011	0.069***	0.094***
Private company	0.069***	0.112***	0.169**	0.101***	0.058	0.066**	0.107***	0.116	0.053***	0.030**
Third sector organization	0.032**	0.095***	0.016	0.463	0.357	0.015	0.024	0.060***	0.280	0.195
Public administration	-0.044***	-0.067***	-0.034	-0.078***	-0.079***	-0.047***	-0.035	0.031	0.000	-0.011
Social services	0.011	-0.009	-0.169***	0.013	-0.027	0.029	0.040	-0.127	0.058	-0.002
Culture	0.009	0.001	-0.099***	-0.066**	-0.099***	0.028***	0.056	-0.087***	-0.001	-0.062
Education and research	0.011	-0.001	-0.143***	-0.027	-0.082	0.031***	0.055	-0.091*	0.019	-0.061***
Local development	0.134***	0.038**	-0.021	-0.192***	-0.209***	0.161***	0.138***	-0.126	-0.059*	-0.093***
Prob > χ^2	0.223	0.151	0.000	0.270	0.236	0.147	0.542	0.653	0.308	0.325

***p value < 0.010, **p value < 0.050, *p value < 0.100; PFD1: Probability of financial distress (Z1); PFD2: Probability of financial distress (Z2).

TABLE 7 Regression results. Instrumental variables

	PFD1	PFD1	PFD1	PFD1
H-H Normalized Index	0.131 ^{***}	0.131 ^{***}	0.129 ^{***}	0.131 ^{***}
Navarre	-0.052 ^{**}	-0.052 ^{**}	-0.051 ^{**}	-0.052 [*]
Promotor	No	Yes	No	No
Size	No	No	Yes	No
Activity	No	No	No	Yes
Prob > χ^2	0.000	0.000	0.000	0.000
	PFD2	PFD2	PFD2	PFD2
H-H Normalized Index	0.147 ^{***}	0.147 ^{***}	0.147 ^{***}	0.147 ^{***}
Navarre	-0.038 ^{**}	-0.038 ^{**}	-0.034 [*]	-0.038 [*]
Promotor	No	Yes	No	No
Size	No	No	Yes	No
Activity	No	No	No	Yes
Prob > χ^2	0.000	0.000	0.000	0.000
	Operational vulnerability	Operational vulnerability	Operational vulnerability	Operational vulnerability
H-H Normalized Index	-0.094	-0.094	0.106	-0.094
Navarre	0.266 ^{**}	0.266 ^{**}	0.156 ^{**}	0.266 ^{***}
Promotor	No	Yes	No	No
Size	No	No	Yes	No
Activity	No	No	No	Yes
Prob > χ^2	0.015	0.035	0.001	0.005
	Leverage vulnerability	Leverage vulnerability	Leverage vulnerability	Leverage vulnerability
H-H Normalized Index	0.116	0.116	0.110	0.116
Navarre	-0.075 [*]	-0.075 [*]	-0.072 [*]	-0.075 [*]
Promotor	No	Yes	No	No
Size	No	No	Yes	No
Activity	No	No	No	Yes
Prob > χ^2	0.283	0.148	0.281	0.171
	Liquidity vulnerability	Liquidity vulnerability	Liquidity vulnerability	Liquidity vulnerability
H-H Normalized Index	0.125	0.125	0.124	0.125
Navarre	-0.078 [*]	-0.078 [*]	-0.078 [*]	-0.078 [*]

(Continues)

TABLE 7 (Continued)

	Liquidity vulnerability	Liquidity vulnerability	Liquidity vulnerability	Liquidity vulnerability
Promotor	No	Yes	No	No
Size	No	No	Yes	No
Activity	No	No	No	Yes
Prob > χ^2	0.265	0.138	0.267	0.217

*** p value < 0.010, ** p value < 0.050, * p value < 0.100; PFD1: Probability of financial distress (Z1); PFD2: Probability of financial distress (Z2).

TABLE 8 Differences in differences test

	PFD1	PFD2	Operational vulnerability	Leverage vulnerability	Liquidity vulnerability
Organizational purpose	1.988**	1.800*	0.820	3.820***	3.320***
Legal entity	0.620	3.750***	11.080***	2.010**	6.800***
Initial endowment	2.780***	1.840*	0.890	3.960***	2.930***
Commercial activity	3.020***	2.510**	0.900	2.190**	1.310
Accountability	1.240	3.750**	19.280***	1.180	1.380
Auditing	1.000	2.860***	18.540***	1.300	0.890
Public monitoring	1.030	3.100***	3.450***	3.220***	2.560**
Patronage	0.240	1.970**	2.040**	1.660*	1.880*

*** p value < 0.010; .

** p value < 0.050; .

* p value < 0.100; PFD1: Probability of financial distress (Z1); PFD2: Probability of financial distress (Z2).

These results are consistent with those of the previous analysis. Thus, the more concentrated the income streams of the organization, the greater its probability of financial distress. However, this effect is less pronounced in nonprofits domiciled in Navarre, for which negative and significant coefficients are found for the financial distress indicators proposed by Greenlee and Trussel (2000) and Trussel et al. (2002) (PFD1 and PFD2). Analysis of the financial vulnerability indicators developed by De Andres et al. (2016) shows that Navarre's nonprofits are able to decrease their levels of leverage and liquidity vulnerability, although they are still operationally vulnerable. So, the tax regulation implemented in Navarre contributes to maintaining lower levels of financial distress, but not all of its features serve to decrease operational vulnerability.

Finally, to enhance the robustness of this analysis, we propose a differences-in-differences test reported in Table 8, which shows the significance levels and t -test scores enabling the comparison of four groups defined according to Figure 2: (a) Navarrese nonprofits complying only with the regional regulation enshrined in Law 10/1996; (b) Navarrese nonprofits that go beyond the regional regulation by voluntarily adhering to the rules in Law 50/2002; (c) Aragonese nonprofits complying with the conditions laid down by Law 50/2002; and (d) Aragonese nonprofits that do not observe the tax rules laid down in Law 50/2002.

The conclusions drawn from the previous analysis are reinforced. Thus, it can be seen that financial distress (PFD1, PFD2) is reduced by promoting a general interest purpose, complying with a minimum initial endowment requirement and keeping commercial activity below 30%. For nonprofits in socio-cultural patronage systems, recognized as legal entities and subject to public monitoring mechanisms, the negative moderating effect on financial distress is found when it is measured with the three indicators developed by De-Andres et al. (2016) and the second of those proposed by Trussel et al. (2002). We also highlight the fact that the only factors able to reduce financial distress due to operational vulnerability are accountability and auditing mechanisms, a finding also reflected in the results of the indicators proposed by Trussel et al. (2002). These effects are only possible in category (b), in which the flexibility of the Navarrese tax regulation enables nonprofits to go beyond the regional regulation by voluntarily adhering to the rules in Law 50/2002.

To summarize, we can conclude that revenue concentration increases the probability of financial distress in nonprofit organizations, but that this effect is attenuated by various features of the tax regulation, such as the organizational purpose, the type of promoter (founder), a minimum initial endowment and the possibility of developing commercial activity. We also find evidence to show that, when financial distress is broken down into operational, leverage and liquidity vulnerability, various factors contemplated by the tax regulation, such as belonging to a socio-cultural patronage, recognition as a legal entity, public monitoring mechanisms, accountability and auditing, can also contribute to reducing specific vulnerabilities. Thus, we are unable to reject H_1 , given that the tax regulations for nonprofit organizations have a positive and significant moderating effect on the relationship between revenue diversification and financial distress. However, it should be noted that this moderating effect is less pronounced in the case of factors such as accountability and auditing, which affect only operational vulnerability.

5 | DISCUSSION

The results of this study show a conditioning effect of the tax regulation on the interaction between revenue diversification and the probability of financial distress. More specifically, it can be seen that some nonprofit tax regulations relating to stated charitable purpose, minimum initial endowment, percentage of commercial activity and level of accountability and monitoring, can moderate the impact of revenue diversification in reducing the probability of financial distress and financial vulnerability of nonprofit organizations.

This moderating influence can be explained by the resource dependence theory, which proposes that the survival of an organization will depend on two factors: (a) interaction with resource providers; and (b) the social context (Froelich, 1999, p. 248). Dependencies on resource providers are reduced by income diversification, as are the levels of financial distress experienced by nonprofit organizations. Previous literature has evidenced the fact that higher levels of revenue diversification improve the financial health of nonprofit organizations (López-Arceiz et al., 2017; Chang et al., 2018; García & Romero, 2018) by boosting their legitimacy, self-sufficiency and autonomy (Chang & Tuckman, 1991; Froelich, 1999). While our results confirm this, we also find that this effect is moderated by the second factor, the social context, represented by nonprofit tax regulations. Tax regulations are part of the external environment defining the general conditions in which nonprofit organizations operate (Mitchell & Berlan, 2018; Lee, 2021).

Various studies have analysed the impact of tax regulations on the volume of donations and degree of revenue diversification in nonprofit organizations (Auten et al., 2002; Karlan & List,

2007; Lin & Wang, 2016; James, 2018). Their conclusions point to a positive impact of tax incentives on revenue diversification. However, these studies ignore some of the tax conditions that nonprofits are required to fulfil in order to obtain tax benefits. Our results evidence the fact that these conditions, which are usually built into the tax laws, are key to determining the revenue structure and improving the financial health of a nonprofit organization. Thus, our findings show that, to avoid financial distress through the diversification of revenue streams, a nonprofit organization needs to adopt a common purpose, increase its initial endowment, moderate its commercial activity and submit to monitoring mechanisms. Otherwise, the positive effect of a diversified revenue structure could be lost.

This latter result has several management implications for nonprofit organizations. Firstly, managers will tend to domicile nonprofit organizations in regions where more flexible tax regulations allow them to voluntarily implement only those monitoring mechanisms (e.g., auditing) that will protect their financial vulnerability (Henriksen, 2015). Our results show the Navarre tax regime to be more flexible, which may explain why nonprofit organizations domiciled in this region maintain higher levels of income diversification and lower levels of financial distress. Secondly, managers will be tempted to diversify their income sources in the presence of institutional support. In this respect, Topaloglu et al. (2021) shows that nonprofit organizations can be pushed into a power-disadvantaged position by relying heavily on government support and institutional contributions, which sometimes come with strings attached. This can be avoided if the institutional support takes the form of tax regulations aimed at increasing interaction between the nonprofit organization and its external environment (Kim et al., 2018). Finally, managers will increase their autonomy by reducing interdependencies with the external environment (Pfeffer & Salancik, 1978, p. 100). Viewed from the resource dependence approach, income diversification is beneficial to nonprofit organizations because it enables a balanced relationship between fund providers, by maintaining a certain equilibrium among them. This sustains the autonomy of these organizations and reduces their risk of financial distress. Consequently, the positive effects on financial distress due to income diversification can increase in the presence of flexible tax regulations.

Nevertheless, it is important to stress that tax regulations exert opposing effects. On the one hand, they can boost the positive effects on the level of financial distress achieved through revenue diversification. In this sense, a “soft” tax regime like that of Navarre, will reduce financial vulnerability in nonprofits via revenue diversification. In this region, nonprofit organizations operate under only minimum legal obligations, and thus enjoy greater autonomy, as explained above. On the other hand, tax regulations can dilute the positive effects associated with revenue diversification by obliging these entities to concentrate their revenue structure. Stricter legal requirements, such as those imposed on Aragonese nonprofit organizations, are characteristic of a different type of regime enforcing a legal framework with no room for exemption. This condemns nonprofit organizations to higher levels of revenue concentration and financial distress, although this interaction effect is moderated by compulsory monitoring.

Consequently, the results show that the relationship between revenue diversification and financial distress is moderated by certain nonprofit tax regulations. The effects work in different directions, depending on the mechanisms adopted by each region, which vary due both to economic, political and social issues (Irvin, 2002; Jorissen et al., 2013), and to cultural values and traditions (e.g. López-Arceiz et al, 2021). In this respect, we agree with Obach (2010), Montero (2013), Salido-Andres et al. (2019) and Rey-Garcia (2020), among others, who show that tax regulations can differ, even within the same country. These differences, as contextualized within a place-based approach, represent an opportunity for nonprofit organizations to strengthen their

ties with the environment, and reinforce their interconnectedness with the territory by promoting sustainability, social innovation and collaboration (European Committee of the Regions, 2019).

6 | CONCLUSIONS

The aim of this study was to analyse the role of tax regulations as a moderating factor in the relationship between revenue diversification and financial distress in nonprofit organizations. Our results reveal that some of the regulations included in tax codes positively promote a diversified income structure, thus reducing the risk of financial distress and financial vulnerability. Nevertheless, the tax regime is a double-edged sword that can also lead to a concentration of income sources. Thus, a “soft” regulatory approach, allowing nonprofits higher degrees of autonomy will promote diversification, while a restrictive approach, subjecting them to compulsory accountability and monitoring mechanisms, could favour a concentrated income structure.

This finding has several implications. Firstly, income diversification reduces the dependence of nonprofit organizations on government support, by enabling them to source funding from different providers and thereby decrease their levels of financial distress. Diversification means greater autonomy, which can be an advantage for the management of these entities. Secondly, income diversification is affected by the tax regime. In this respect, nonprofit managers need to be aware that some aspects of monitoring can drive operational improvements, especially in the face of operational vulnerability. Nevertheless, monitoring by the tax authority could also result in a concentrated income structure. This situation creates regional differences, potentially leading to different nonprofit organization models with diverse levels of financial distress. Thus, basic characteristics, such as an organizational purpose of general interest, official recognition as a legal entity, minimum initial endowments and accountability standards create a difference among otherwise similar nonprofit organizations. We also stress the need for balanced management of the different income sources. Managers should be aware that income diversification will be useful if they are able to spread their resource requirements across different providers, while keeping the weight of their contributions evenly balanced. Otherwise, the advantages associated with income diversification and the flexibility of tax regulations can be missed. Finally, managers could also implement certain features of the tax regime as a solution for financial distress. Highly flexible regimes, for instance, can provide managers with the means to confront a situation of financial distress.

Lastly, we need to mention the limitations of this study. For example, our sample is composed of nonprofit organizations located in two Spanish regions. Thus, although the conclusions could be extended to other countries with a federal structure (e.g. Germany, Italy, the UK and the US), this will require taking into account any differences in cultural traditions and values. Another issue to bear in mind is that we have not analysed the role of tax incentives, having focused our analysis on the conditions nonprofit organizations must meet in order to conform to a singular tax regime. Also, while our measure of income diversification is based on the Herfindahl-Hirschman Normalised Index, it might be interesting to draw on indicators from portfolio theory (Kingma, 1993). Nevertheless, despite these limitations, analysis of the relationship linking tax regulations, revenue diversification and financial distress is key to improving the financial sustainability of nonprofit organizations.

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APPENDIX I: MAIN VARIABLES

Abbreviation	Indicator	Definition	Codification	Article (Regulation)
TR ₁	Purpose	Purpose promoted by the nonprofit organization	0 = Collective purpose 1 = General purpose	Arts. 42 and 43 (Regional Law 21/2019) Art. 3.1 (Law 50/2002)
TR ₂	Legal entity	The nonprofit has been officially recognized as a legal entity	0 = No 1 = Yes	Art. 44 Art. 7.1 (Regional Law 21/2019) Art. 4.1 (Law 50/2002)
TR ₃	Initial endowment	Initial endowment for the creation of the nonprofit organization	0 = Less than 30,000 euros 1 = More than 30,000 euros	Art. 7.1 (Regional Law 10/1996) Art. 12.1 (Law 50/2002)
TR ₄	Commercial activity	Commercial activity as a percentage of operating income	0 = Less than 70% 1 = More than 70%	Art. 27.1 (Law 50/2002) Art. 9 (Regional Law 10/1996)
TR ₅	Accountability	The financial statements are officially presented in the public register	0 = No 1 = Yes	Art. 11.4 (Regional Law 10/1996) Art. 25.7 (Law 50/2002)
TR ₆	Auditing	The financial statements have been audited	0 = No 1 = Yes	Art. 11.1 (Regional Law 10/1996) Art. 25.5 (Law 50/2002)
TR ₇	Public monitoring	The nonprofit is monitored by a public administration (protectorate)	0 = No 1 = Yes	D.A 1 ^a (Regional Law 10/1996) Art. 34 (Law 50/2002)
TR ₈	Socio-cultural patronage	The nonprofit is a beneficiary of socio-cultural patronage	0 = No 1 = Yes	Art. 22 Law 49/2002 D.A 10 ^a (Regional Law 10/1996)