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Roberto Censolo, Caterina Colombo

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SOCIAL PREFERENCES REVEALED: EVIDENCE FROM THE 5x1000 TAX ALLOCATION

Roberto Censolo^a

(Università degli Studi di Ferrara)

Caterina Colombo^b

(Università degli Studi di Ferrara)

Abstract

This paper represents the very first attempt to employ the data of 5x1000 allocation of personal income tax for the purpose of studying the evolution of social preferences of Italian taxpayers. The 5x1000 initiative encourages voluntary contributions toward the support of public goods and collective resources, by allowing taxpayers to direct 0.5% of their personal income tax to nonprofit organizations and public institutions. Our results indicate a decline in moral universalism, accompanied by a gradual shift in social preferences away from solidaristic concerns, leading individuals to prioritize self-interest over empathy for distant others. In addition, universalistic preferences are predominantly found among middle-income taxpayers. In contrast, both lower- and higher-income groups display more particularistic tendencies. For low-income individuals, particularism often centres on immediate material needs. Among high-income taxpayers, it reflects preferences aligned with lifestyle values, such as the prioritization of leisure and quality of life.

Keywords. 5x1000 scheme, social preferences, moral universalism.

JEL Classification: H24, H31, D64, D10

^a Roberto Censolo, Dipartimento di Economia e Management, Università degli Studi di Ferrara, Via Voltapaletto 11 - 44121 Ferrara, Italy, tel. +39 0532 455071, e-mail: roberto.censolo@unife.it

^b **Corresponding Author:** Caterina Colombo, Dipartimento di Economia e Management, Università degli Studi di Ferrara, Via Voltapaletto 11 - 44121 Ferrara, Italy, tel. +39 0532 455068, e-mail: caterina.colombo@unife.it

1. Introduction

The 5x1000 (five per thousand) scheme is designed to promote the voluntary support of public goods and the safeguarding of collective resources by enabling taxpayers to allocate 0.5% of their personal income tax to initiatives managed by nonprofit organizations and public institutions. These organizations are grouped into distinct sectors based on their specific objectives, and taxpayers may either select a sector (generic choice) or designate a particular organization as the beneficiary of their tax contribution (specific choice). Currently, there are seven sectors, encompassing scientific and medical research, volunteer work, municipal social services, amateur sports, preservation of Italian cultural and landscape heritage, and protected environmental areas. For each sector, the Italian Revenue Agency (*Agenzia delle Entrate*) annually releases data detailing the distribution of preferences and the funds allocated. Since the 5x1000 initiative is intended to support activities of recognized public interest and social utility, taxpayers' choices can offer insights into the structure of their underlying social preferences. Accordingly, the 5x1000 dataset represents a valuable opportunity to explore social preference through an observational approach based on real-world behaviour¹. To the authors' knowledge, this is the first study exploiting this unique data source for such an analysis.

In broad terms, social preferences refer to the concern individuals show for the wellbeing of others (Charness and Rabin, 2002; Levitt and List, 2007; Carpenter, 2008). The literature has typically framed these preferences as a general altruistic and prosocial disposition. However, this perspective tends to be overly broad when compared to actual behaviour. In practice, individuals may display strong prosocial tendencies toward groups with whom they share emotional or identity-based ties, while remaining indifferent—or even hostile—toward more socially distant groups.

The variability of social preferences along this dimension was recognized and formalized in a well-known theoretical model by Tabellini (2008). The central idea is that the degree of moral

¹ In general, the structure and distribution of social preferences have been investigated in laboratory settings, through survey analysis, and in field experiments. Fehr and Charness (2025) offer a comprehensive review of literature on social preferences, particularly focusing on empirical issues.

universalism in social preferences is a function of social distance: the more invariant an individual's altruism is to changes in social distance, the more universalist they are. Conversely, the more rapidly altruism declines with increasing social distance, the more particularist the individual becomes. The heterogeneity of social preferences along the dimension of moral universalism has stimulated a substantial body of recent research. This literature demonstrates not only that moral universalism helps define the scope of prosocial behaviour and account for variability in social preferences, but also that understanding universalism offers a valuable framework for interpreting broader patterns of political and economic decision-making (Enke et al., 2022; Enke, 2024; Cappeland et al., 2025)), and furthermore, it provides important insights into the moral foundations of ideological divides (Enke et al., 2024).

For the purpose of this analysis, by social preferences, we refer to an individual's capacity, shaped by their personal value system and worldview, to rank external situations with a social relevance according to a preference relation. This evaluation process relies on an imaginative and empathetic mechanism, focusing on scenarios that do not directly pertain to the individual's personal utility but rather concern the wellbeing of larger groups of people outside the circle of close relationships. As discussed in detail later, the heterogeneity across 5x1000 sectors can be seen as an expression of differing underlying ideal values—reflective of distinct forms of social awareness and civic engagement—such that taxpayers' choices can be meaningfully evaluated through the lens of moral universalism. In this paper we first aim to examine the temporal evolution of preferences across different sectors to assess whether the social preferences of taxpayers participating in the 5x1000 scheme—averaging nearly 17 million annually over the past decade—have evolved along the dimension of moral universalism between 2008 and 2023. Our findings suggest a significant decline in the degree of moral universalism alongside a gradual change in social preferences away from solidaristic concerns, leading individuals to favor self-interest over concern for more distant others.

The 5x1000 dataset published by the Italian Revenue Agency contains no information regarding the demographic or socioeconomic characteristics of the taxpayers who participate in the scheme.

However, since the 5x1000 contribution is determined as a fixed percentage of taxpayers' personal income tax, the average contribution can serve as a proxy for the income bracket of the typical taxpayer who allocates their 5x1000 to a particular sector. Therefore, a second objective of this paper is to investigate whether the degree of moral universalism underlying social preferences varies across different income brackets of taxpayers. The emerging pattern reveals notable variation in social preferences across income groups. Preferences characterized by greater universalism are primarily concentrated among middle-income taxpayers, while both lower- and higher-income brackets exhibit more particularistic tendencies. Among high-income individuals, particularism is reflected in choices that prioritize leisure as a key aspect of wellbeing, whereas for low-income taxpayers, it reflects a focus on basic needs. Finally, we aim to highlight the factors that drive the choice of a specific organization over a generic sector designation. In this context, additional insights emerge from the correlation between specific versus generic choices and the income brackets of taxpayers.

The paper is organized as follows. Section 2 provides a detailed overview of the evolution of the regulatory framework governing the 5x1000 scheme. This section also details the functioning of the 5x1000 scheme, the description of various sectors, and the dataset utilized in the empirical analysis. Section 3 investigates the temporal evolution of taxpayers' choices. Section 4 examines how 5x1000 allocations vary across high-, middle-, and low-income taxpayers. Section 5 explores the factors influencing the choice between specific and generic allocations. Finally, Section 6 offers some concluding remarks.

2. Regulations and data on the 5x1000 tax allocation

The 5x1000 scheme enables taxpayers to allocate five per thousand of their personal income tax (IRPEF) to organizations that operate in fields of recognized public interests for purposes of social utility. This option was introduced on an experimental basis in 2006 (Finance Law n. 266 of December 23, 2005, Article 1, clauses 337 and ff.) and has been renewed annually in subsequent finance laws, becoming a permanent measure in 2015 (Law 23 n. 90 of December 23, 2014). Between 2006 and

2014, the annual budgeted expenditure was approximately 400 million euros. Beginning in 2015, the total expenditure for the allocation of the 5x1000 share was authorized at 500 million euros per year. This amount gradually increased to 510 million euros in 2020, 520 million euros in 2021, and 525 million euros starting from 2022.

To exercise this option, taxpayers must sign the relevant box on their income tax return, indicating the specific purpose to which they wish to allocate their 5x1000. Only one allocation choice is permitted². In the same box, taxpayers can also indicate the fiscal code of the specific organization they wish to support. If taxpayers sign without specifying a fiscal code (a so-called “generic choice”), their 5x1000 will be proportionally distributed among all the beneficiaries within the chosen sector. If taxpayers do not sign, their 5x1000 remains within the overall tax revenue.

The 5x1000 of IRPEF can currently be allocated to the following purposes³:

Support for Third Sector Organizations and ONLUS (non-profit organization). This sector includes volunteer organizations, social promotion associations, philanthropic organizations, social enterprises (including social cooperatives), associative networks, mutual aid societies, foundations, and other private non-profit organizations. The statutes of these organizations must pursue civic, solidarity, and social utility purposes by carrying out activities of general interest in the form of voluntary action, free provision of money, goods, or services, mutual aid, production or exchange of goods and services.

Support for Scientific Research and Universities. This sector includes universities (both public and private), inter-university consortia, institutions of higher artistic, musical, and dance education (both public and private), as well as research institutions, regardless of their legal status, whose main purpose is conducting scientific research.

² Taxpayers who do not file an income tax return can still donate 5X1000 through the supplementary form contained in the Certificazione Unica.

³ Decree of the President of Council of Ministers, July 23, 2020, published in G.U. n. 231 on September 17, 2020.

Support for Medical Research. This sector includes structures supervised by the Ministry of Health, such as scientific research hospital (IRCCS), the National Institute of Health, the National Institute for Occupational Safety and Prevention, the Regional Health Services Agencies, the Experimental Zoo prophylactic Institutes. It also includes non-profit organizations and foundations conducting translational research that contribute with their financial, human, and instrumental resources to health research programs established by the Ministry of Health.

Support for Social Activities Carried Out by the Municipality of Residence. Among the various community services provided by the municipalities, the 5x1000 contributions should be primarily allocated to support families with dependent minors facing severe socioeconomic hardship.

Support for Amateur Sports Associations. This includes sport organizations that engage in substantial social activities, provided they have a youth sector and primarily focus on introducing and training individuals under the age of 18 in sports, or on introducing individuals aged 60 or older, as well as disadvantaged individuals (due to physical, mental, economic, social, or familial conditions), to sports.

Support for Protection, Promotion, and Enhancement of Cultural and Landscape Heritage. This sector includes the Ministry of Culture, its autonomous institutions, and legally recognized non-profit organizations that engage in activities to protect, promote or enhance the Italian cultural and landscape heritage and have been operating in this field for at least five years.

Support for the Management of Protected Areas. This refers to National Parks Authorities, which currently total 24 across Italy.

Initially, in 2006, the available allocations were limited to the first four sectors: volunteering (including amateur sports associations), scientific research, medical research, and social activities carried out by municipalities. In 2007 and 2008, municipalities were no longer included, and since 2008, amateur sport associations were separated from volunteering. Starting in 2009, the 5x1000 was

distributed among the first five sectors listed above. Subsequently, two additional sectors were introduced: since 2017, taxpayers could allocate their 5x1000 to organizations involved in the promotion of Italian cultural heritage, and starting in 2018, organizations managing protected areas were also included⁴. To access the allocation of 5x1000, eligible organizations must submit an application and obtain accreditation by the competent authority (the Ministry of Labour and Social Policies, the Ministry of University and Research, the Ministry of Health, the Italian National Olympic Committee, the Ministry of Culture and the Ministry of Environment, respectively). Provided the prescribed criteria are met, accreditation may be granted in multiple sectors concurrently.

Data on preferences and associated funds received by each organization have been available on the Italian revenue Agency website since 2006 for the sectors Scientific Research, Medical Research, and Volunteering. The Municipalities sector was included in the 5x1000 scheme on a continuous basis only from 2009 onward. Furthermore, until 2007, organizations in the Sport sector were classified under Volunteering. Consequently, we restrict our analysis to data from 2008 onwards⁵. For all sectors, the Italian Revenue Agency publishes the number of generic choices allocated, and for each organization, the number of preferences received, the corresponding funds received, and the funds distributed proportionally based on generic choices. The Italian Revenue Agency publishes data for organizations both admitted to and excluded from the 5x1000 scheme in the sectors of Scientific Research, Volunteering, Sport, and Culture. Since our focus is on taxpayers' preferences across these sectors rather than the performance of individual organizations, we use the broadest possible sample. To ensure a comprehensive analysis, we include in the total preferences allocated to each sector also those directed to organizations excluded from the 5x1000 benefit. For our analysis, we consider data for the period 2008–2023, encompassing the total number of preferences expressed in each sector,

⁴ Between 2012 and 2016, taxpayers could sign in support of activities to promote Italian cultural heritage, but without the option to choose a specific organization. In these years, the 5x1000 funds were managed by the Ministry of Culture, which financed projects submitted by accredited organizations.

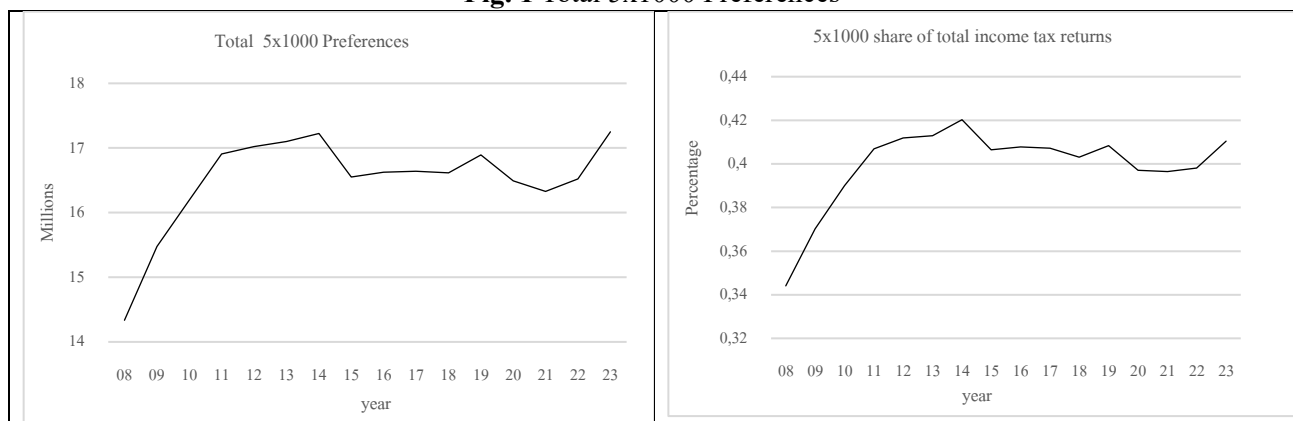
⁵ For the Culture and Nationale Parks sectors, data have been available since 2017 and 2018, respectively.

disaggregated into generic and specific preferences—except in the case of the Municipalities sector, where the generic preference option is not available—as well as the total amounts allocated to each sector in real terms, further distinguishing between funds attributed to specific choices and those resulting from generic preferences.

3. The time evolution of 5x1000 preferences

This section aims to explore the evolution of preferences allocated across different sectors over time. To this end, we begin by providing an overview of taxpayers’ participation in the 5x1000 scheme. Figure 1 illustrates the evolution in total 5x1000 choices from 2008 to 2023, shown both as the total number of signatures and as a share of total income tax returns.

Fig. 1 Total 5x1000 Preferences



The sharp rise in 5x1000 designations—an increase of approximately 3 million between 2008 and 2014—likely reflects a transitional phase during which taxpayers became progressively more aware of and engaged with the 5x1000 mechanism. In contrast, in the latter part of the sample period, the number of 5x1000 preferences appears to stabilize, both in absolute terms and as a proportion of total income tax returns. This suggests that the outflow of older taxpayers exiting the 5x1000 pool each year has been, on average, offset by the inflow of younger generations who, upon entering the workforce, became taxpayers. This pattern suggests dividing the sample into two subperiods for two

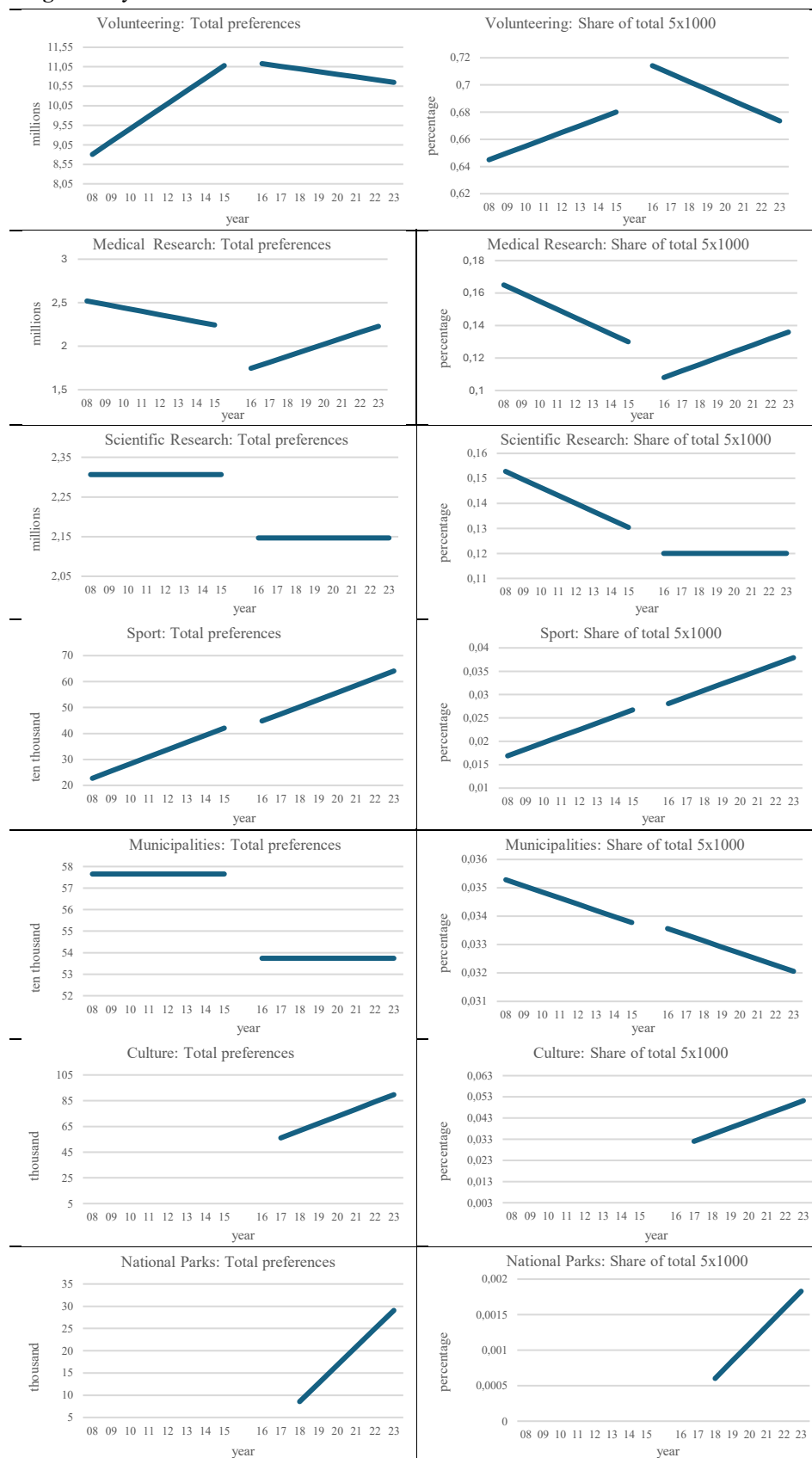
main reasons. First, in the initial phase, any potential shifts in taxpayers' preferences in response to changes in the socioeconomic environment are largely obscured by transitional dynamics. Second, the 'Great Recession'—exacerbated in Europe by the 2010–2011 sovereign debt crisis—likely had a significant impact on individual value systems. Since the value systems that shape individual worldviews tend to evolve slowly in response to economic and social changes⁶, it is appropriate to examine the evolution of preferences separately by dividing the sample period into two subperiods: 2008–2015 and 2016–2023⁷. By isolating these timeframes, the analysis can better capture distinct patterns of change without the confounding effects of overlapping transitional dynamics.

To analyse the evolution of preferences within each sector across the two subperiods, we employ the following methodology. For each sector, we consider both the total preferences, and the preferences expressed as a percentage of the overall 5x1000 preferences. For each variable, we estimate a simple model with a time trend for each subperiod separately. We then compare the estimated coefficients between the two subperiods using a formal test to assess whether the same temporal trend holds across the entire sample period, or if the two subperiods exhibit distinct trends. If the regression identifies a significant trend only in one subperiod, and the trend coefficients are statistically different, then we treat the variable as stationary around its mean in the other subperiod. Finally, if neither trend is significant, we repeat the procedure by omitting the time trend and perform a formal test to determine whether the two subperiods have the same mean. A graphical representation of the results from this procedure is shown in Figure 2.

⁶ Leijen et al. (2022) conducted a 12-year longitudinal panel study and identified clear generational differences in human values. They found that internal changes, if they occurred, happened at a very slow pace, especially among older generations.

⁷ Figure 4 in the Appendix shows the historically observed evolution of total preferences and their distribution as a share of the total 5x1000 signatures across each of the seven sectors. In 2023, the distribution of signatures among the various categories was as follows: 63.2% went to Volunteering, 16.5% to Medical Research, 13.1% to Scientific Research, 3.4% to Sport, 3.1% to Municipalities, 0.4% to Culture, and 0.2% to National Parks.

Fig. 2 A Stylised Overview of the Time Evolution of Preferences



In the first subperiod, the gradual increase in taxpayer engagement with the 5x1000 mechanism was accompanied by a steady rise in preferences for the Volunteering and Sport sectors. Given that preferences for Municipalities and Scientific Research remained relatively stable⁸, and a slight decline was observed in preferences for Medical Research, the overall increase in 5x1000 signatures—approximately 2.2 million—can be largely attributed to the growth in signatures directed toward Volunteering and Sport, which accounted for approximately 1.6 million and 0.29 million, respectively.

Given the average stationarity of total 5x1000 preferences in the second subperiod, the dynamics observed across the various sectors reflect the generational turnover within the taxpayer sample, as well as the evolution of preferences within the permanent subset of taxpayers—those who remained in the 5x1000 sample throughout the 2016-2023 period.

Compared to the initial subperiod, during which the observed trends mainly reflect the gradual transition of taxpayers progressively joining the 5x1000 scheme, Figure 2 suggests a substantial change in the composition of social preferences within the sample. In particular, we observe that between 2016 and 2023, social preferences shifted away from the Volunteering and Municipalities⁹ sectors, moving instead toward Medical Research, Sport, Culture, and National Parks. In contrast, preferences for Scientific Research remained relatively stable over the same period.

To interpret the pattern observed in the second subperiod, it is important to notice that the various sectors differ in terms of the specific social values they reflect. Owing to the explicit mission of the organizations within the Volunteering sector and the purposes for which Municipalities can allocate 5x1000 funds, both sectors exhibit a distinctly solidaristic orientation. By contrast, Sport and Culture emphasize two different dimensions related to personal wellbeing and, as such, share a more individualistic character. Scientific Research and Medical Research are undoubtedly united by the

⁸ The declining trend observed in the share of preferences for the Municipalities and Scientific Research sectors reflects the increase in the total number of 5x1000 signatures in the denominator.

⁹ We consider that preferences in the Municipalities sector decreased during the second subperiod, as evidenced by the reduction in its share of the total 5x1000 allocations, because the division into two subperiods actually prevents the identification of a significant declining trend that characterizes total preferences across the entire 2009–2023 period.

shared value of knowledge. However, while Scientific Research has a universal scope, encompassing all disciplines, Medical Research is characterized by a more specialized focus. From the perspective of ordinary people, the goal of advancing knowledge should be to solve problems and overcome challenges faced by humanity. The universal scope of knowledge in the Scientific Research sector suggests that the motivation of taxpayers who allocate their 5x1000 to this sector is driven by the hope that the progress of knowledge will broadly contribute to the advancement of humanity. By contrast, the specialized focus of the Medical Research sector limits the benefits of knowledge to areas specifically related to health. It is therefore plausible that taxpayers who choose to support this sector believe that the advancement of knowledge should be guided and constrained by human needs. In addition to this particularistic perspective, an individualistic motivation may also play a role, as taxpayers may be personally driven by the hope for longevity and an enhanced quality of life in terms of personal health. Finally, the National Parks sector undoubtedly appeals to taxpayers with an environmental consciousness. However, it is important to note that the mission of park authorities is to safeguard specific, geographically bounded areas within the Italian territory, rather than to contribute to global environmental preservation. From this perspective, preferences for this sector may reflect an environmental concern shaped by individualistic motivations—emphasizing localized conservation efforts over a broader ecological commitment.

On the basis of these considerations, the negative trend in Volunteering and Municipalities, coupled with the positive trend in Medical Research, Sport, Culture, and National Parks, reveals a significant shift away from solidarity-oriented sectors and a marked increase in preferences for those with a more individualistic orientation. A substantial body of research has examined the long-lasting adverse effects of the 'Great Recession' on people's psychological wellbeing, highlighting its particularly pronounced impact on younger individuals (Bacigalupe et al., 2016; Fisman et al., 2015; Thompson, 2023). In particular, Bietenbeck et al. (2025), show that the exposure to a recession during early adulthood is associated with lower levels of prosociality later in life. Therefore, one driving force behind the shift toward individualism may be the generational turnover within the taxpayer

sample, suggesting that younger generations prioritize personal interests and individual rights over the collective welfare of humanity. However, it seems unlikely that the increasing trend in Medical Research observed in the second subperiod can be primarily attributed to the entry of younger generations. A more plausible explanation is that the prolonged economic insecurity following the 2008–2009 financial crisis—intensified by the 2010–2011 sovereign debt crisis and subsequent fiscal austerity measures—has reinforced the demand for social protection, particularly among older segments of the population. As a result, the upward trend in preferences for Medical Research may have been driven mainly by taxpayers who redirected their 5x1000 contributions, potentially at the expense of more solidarity-oriented sectors¹⁰. Finally, it is plausible that the impact of the pandemic crisis may have played a role in shaping this trend.

Several strands of literature suggest a negative correlation between solidarity and individualism, particularly in market-based societies, where the strong emphasis on personal responsibility for economic and social success or failure tends to undermine affective solidarity (Lynch and Kalaitzake, 2020). However, it should be noted that while individualism may be understood as a form of particularism, solidarity is not necessarily universalistic in the sense proposed by Tabellini (2008). Indeed, a particularistic form of solidarity can arise when empathic concern for others is limited to personal relationships. Therefore, to gain a deeper understanding of the evolution of social preferences through the lens of moral universalism, we can draw on the fact that different sectors can be ranked according to the degree of universalism or particularism embedded in their underlying missions.

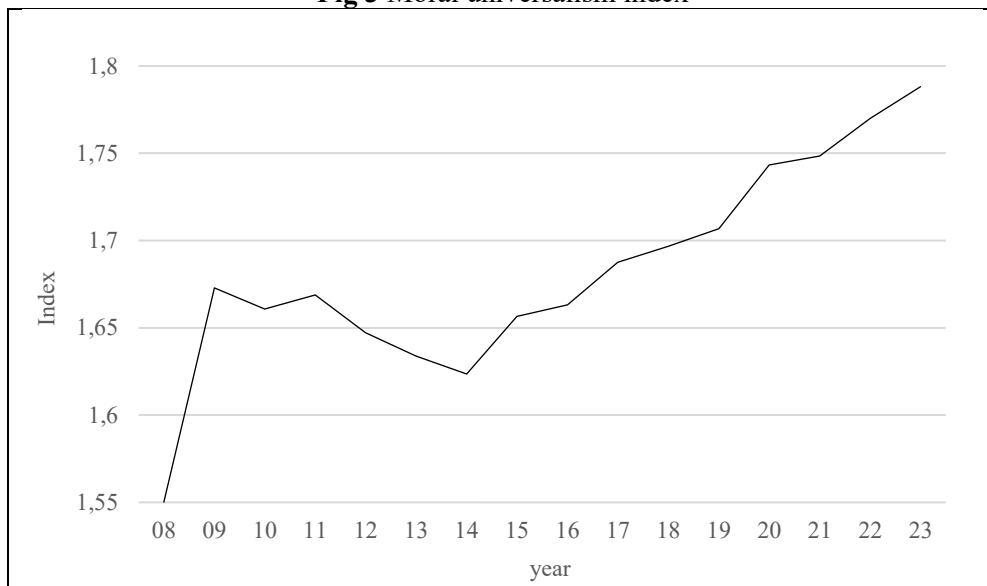
In this regard, the Volunteering sector, which is primarily involved in addressing a wide range of human needs on a global scale, appears to be the most universalistic. Scientific Research does not inherently possess a moral character. However, because the benefits of advancing knowledge are non-

¹⁰ Changes in time perspective affect social preferences: When future time is perceived as limited (e.g., as a consequence of aging or disease), social preference show a decrease of universalism (Fredrickson and Carstensen, 1990; Fung, Carstensen, and Lutz, 2001).

excludable and produce positive externalities that are universally shared, we rank the Scientific Research sector second in terms of its alignment with universalism. Medical Research, as a subset of broader scientific inquiry, tends to be more particularistic than general scientific research. Accordingly, we rank it third in our evaluation. The solidarity activities promoted by Municipalities, although motivated by the necessity of supporting vulnerable people facing adverse socioeconomic or health conditions, remain confined to their respective administrative boundaries. Due to the territorial limitations of the benefits provided by social policies, we rank the Municipalities sector fourth. We identify Culture, National Parks, and Sport as the most particularistic sectors, as the benefits they generate are territorially confined to the Italian context and are more related to leisure and personal enjoyment. Among these sectors, Culture appears to generate somewhat broader positive externalities than National Parks, primarily due to its wider territorial reach. Accordingly, Culture ranks fifth and National Parks sixth on our scale of moral universalism. Lastly, Sport is considered the most particularistic sector because, compared to Culture and National Parks, it is more explicitly associated with leisure activities.

Based on these considerations, we construct a composite index of moral universalism for each year. Each sector is assigned an ordinal number corresponding to its rank in the moral universalism scale (1: Volunteering, 2: Scientific Research, 3: Medical Research, 4: Municipalities, 5: Culture, 6: National Parks, 7: Sport). We then calculate, for each year, the weighted average across sectors, using the share of 5x1000 preferences as weights. The temporal evolution of this index is shown in Figure 3.

Fig 3 Moral universalism index



The slight decline in the index between 2009 and 2014 should not be interpreted as a genuine increase in moral universalism, as it coincides with a substantial rise in taxpayer participation in the 5x1000 scheme¹¹. In contrast, since the taxpayer sample appears to stabilize after 2014, the subsequent upward trend in the index reveals a marked decline in moral universalism. This peculiar pattern seems to support the conjecture that the impact of the Great Recession—which, in the years that followed, amplified the negative effects of rising inequality and economic uncertainty—not only had structural consequences for macroeconomic performance, but also set in motion a gradual transformation of the value system that shapes individual moral structure. In light of this result, the apparent erosion of solidarity and the rise of individualism may not indicate an absolute moral decline in individuals. Instead, individuals still possess the capacity for empathy, but the circle of those they regard as morally significant has become increasingly narrow.

4. Social preferences across taxpayers' income brackets

¹¹ The 2008 value reflects the absence of data from the Municipalities sector, which has been available only since 2009.

The 5x1000 database provided by the Italian revenue Agency on its portal does not include any information on the demographic or socioeconomic characteristics of taxpayers participating in this scheme. For each sector, it only reports the number of signatures received by organizations, the corresponding amount of funds, and the additional share resulting from the distribution of generic preferences. However, it is important to note that the 5x1000 contribution is calculated as a percentage of the personal income tax owed by each taxpayer. Therefore, using the available data, it is possible to calculate the average contribution per signature for each sector, and thus obtain a proxy to estimate the income bracket of the typical taxpayer allocating their 5x1000 to a specific sector. For each year, we calculate the average contribution in real terms for each sector by dividing the total contribution in real terms by the total number of signatures received¹². In Table 1 below, we report the average contributions in real terms for each sector from 2008 to 2023, ranked from highest to lowest, along with the average share of each sector relative to the total 5x1000 preferences.

Table 1 Ranking of Average Contributions		
Sector	Average Contribution	Share of total 5x1000
<i>Culture</i>	33.52	0.4
<i>Sport</i>	29.68	3.1
<i>Volunteering</i>	28.43	64.7
<i>Sc. Research</i>	28.21	12.9
<i>Med. Research</i>	26.35	16.6
<i>Nat. Parks</i>	26.33	0.1
<i>Municipalities</i>	25.66	3.2

Based on the ranking of average total contributions across different sectors shown in Table 1, we can identify three income groups¹³. The high-income group accounts for 3.5% of the 5x1000 signatures and includes taxpayers who, on average, have shown a preference for Culture and Sport. The middle-income group accounts for 77.6% of the preferences and includes taxpayers who have

¹² The descriptive statistics of these data are presented in Table 5 in the Appendix. Contributions in real terms are obtained by using the GDP deflator.

¹³ The differences in average contributions that define the three income groups were tested using a formal t-test.

directed their contributions towards Volunteering and Scientific Research. Finally, the low-income group, representing 18.9% of the signatures, has shown a preference for Medical Research, National Parks, and Municipalities. The classification into three income brackets suggests that the social preferences influencing the choice of sector for allocating the 5x1000 are significantly differentiated based on the taxpayers' economic status.

Within the highest income group, the largest average contribution was directed towards Culture (11.4% of taxpayers in this group). This choice highlights an interest in preserving and promoting Italian historical and cultural heritage. It likely reflects on the one hand, a greater awareness and understanding of cultural issues due to a higher level of education, and on the other, the significance of Italian culture as a key element of identity. The remaining 88.6% expressed a preference for the Sport sector. This choice reflects a segment of middle to high-income taxpayers whose social preferences are strongly focused on activities that promote leisure and recreation.

The significant difference in average contributions between the two sectors identifies two groups of taxpayers who differ not only in economic status but likely also in education levels and cultural backgrounds. However, the Culture sector, given the nature of the organizations it encompasses, also has a clear connection to leisure and personal enjoyment. Indeed, the conservation and enhancement of sites and institutions that represent and safeguard Italian cultural heritage enhance leisure opportunities in pleasurable and enriching activities that promote wellbeing and personal satisfaction. This focus on leisure characterizes the social preferences of high-income group of taxpayers in a particularistic way. Firstly, leisure is a fundamental component of the individual utility function. Secondly, the positive externalities of contributions to the Culture and Sport sectors do not benefit the population uniformly; instead, they are concentrated within a group of individuals who, due to their socioeconomic and psychophysical conditions, are able to devote their leisure time to cultural or sport activities. Moreover, another common aspect among the choices of taxpayers who allocate funds to these sectors is that both cultural and sport activities serve as vehicles for fostering a sense of belonging, contributing to the development of a social identity in which individuals can

recognize themselves¹⁴. As a result, this element of identity further shapes the social preferences of these taxpayers in a particularistic way.

In the middle-income group, preferences are directed towards Volunteering and Scientific Research. The average contributions differ by only €0.22 between the two sectors. Therefore, the preferences allocated to these sectors do not identify different income classes. Within this group, 83.4% of the choices are directed towards Volunteering. The Volunteering sector includes various types of organizations: associations supporting civilian war victims, organizations aiding children with disabilities, those focused on alleviating socioeconomic distress, and centres dedicated to the protection of rights and social promotion. Additionally, it encompasses organizations committed to medical research, animal protection, and religious associations. Despite the diversity of their specific purposes, all these organizations, within the common framework of volunteering, convey the moral values of altruism and empathy. These values motivate individuals to dedicate their energies to alleviating the difficulties, distress, or suffering of those in need of help, protection, or assistance. Notice that, while some organizations are categorized under both the Medical Research and Volunteering sectors, the motivations behind taxpayers' choices differ based on the sector selected. In the realm of Medical Research, the primary focus is on the outcomes of research endeavours, aiming to advance scientific knowledge and improve healthcare. Conversely, within the context of Volunteering, the emphasis shifts to the dedication and commitment of individuals who devote themselves to finding a cure for those afflicted by illness¹⁵.

The 16.6% of preferences within the middle-income group are directed toward the Scientific Research sector. This sector encompasses universities, foundations, and research centres, all of which aim to advance fundamental knowledge in both scientific and humanistic fields. Basic research may

¹⁴ In the case of Culture, social identity is framed within the boundaries of Italian culture and tradition, while in the case of Sport, it is the sharing of a passion or interest with others that promotes a sense of belonging and community.

¹⁵ In this context, it is also possible to consider animal protection organizations and religious associations included in Volunteering sector. In the former case, animals are regarded as subjects in need of protection, while in the latter case, it is humanity as a whole that requires protection and salvation. In both instances, the framework of Volunteering highlights the selfless dedication of the individuals involved in the organization.

not have an immediate impact on individuals' current wellbeing, but it enhances the potential for greater wellbeing in the future. In this way, taxpayers demonstrate a concern that goes beyond the present, considering the wellbeing of future generations. Furthermore, scientific research contributes to the advancement of knowledge, which typically has the characteristics of a public good. Therefore, supporting scientific research not only reveals a non-simplistic view of reality, but also emphasizes the value of knowledge as a good that can be enjoyed on a universal scale.

It should be noted that this characteristic of non-excludability also applies to the activities of organizations within the Volunteering sector: alleviating socioeconomic hardship or suffering creates a broader societal benefit that is inherently non-excludable. Although the preferences for Volunteering and Scientific Research may stem from different value systems, taxpayers within the middle-income group overall show social preferences that reflect a certain degree of universalism.

In the lowest income group, preferences are directed toward the sectors of Medical Research, Municipalities, and National Parks. Of the preferences within this group, 82.5% are directed toward Medical Research, 17% towards Municipalities, and only 0.5% toward National Parks. The Medical Research sector consists of a range of organizations selected by the Ministry of Health, including public and private research institutes, hospitals and healthcare facilities, as well as non-profit organizations¹⁶. Medical research seeks to enhance diagnostics and therapies through the advancement of knowledge. In this regard, the new knowledge generated, possesses the characteristics of a public good, with its non-excludability extending on a global scale. However, it is important to note that the mission of the organizations within this sector is to contribute to health protection, which directly affects individuals' wellbeing by improving both life expectancy and quality of life. The greater the subjective perception among taxpayers that health protection is essential to their personal wellbeing, the more their contribution can be seen as addressing a primary

¹⁶ Note that some organizations, such as Telethon, the Italian League Against Cancer (Lega Italiana contro i Tumori), and the Italian Association for Cancer Research (Associazione Italiana per la Ricerca sul Cancro), are also included in the Volunteering sector.

need, rather than simply advancing knowledge in the medical-scientific field. The subjectively perceived importance of this need has been shown to be influenced by the taxpayer's socioeconomic conditions. Several empirical studies highlight how income shapes health and longevity. In particular, individuals in the lower income percentiles have a shorter life expectancy and poorer health-related quality of life compared to those in higher income classes¹⁷ (Chetty et al., 2016; Avanceña et al., 2021; Xiong and Wei, 2025). This empirical evidence suggests that taxpayers in the lower income bracket, who sign for Medical Research, view medical research more as a means to protect their personal wellbeing than as a tool to advance knowledge for the benefit of all humanity.

The Municipalities sector receives the lowest average contribution, which is allocated to activities that serve social and public welfare. These include support for the elderly, disabled, or children in need, as well as the enhancement of local healthcare services, infrastructure, and the environment. Additionally, the funds can be used to finance initiatives against poverty and marginalization, and projects for social integration. Overall, these activities aim to improve service quality, meet the essential needs of specific groups of citizens, and safeguard fundamental rights. It is important to note that the benefits of these initiatives are exclusively directed towards residents within the administrative boundaries of the municipalities. Therefore, the decisions of taxpayers who allocate the 5x1000 to the Municipalities sector cannot be driven by universal social preferences. This particularistic dimension may also be supported by identity factors that connect the taxpayer to their place of residence. Furthermore, taxpayers' motivations may not be driven solely by solidarity; they could also be influenced by the expectation of a positive impact on their personal wellbeing. This should be understood not only in terms of improvements in the services offered to citizens but also in terms of positive externalities that benefit individuals through measures that enhance the socioeconomic environment of the community¹⁸.

¹⁷ For example, according to the Health Foundation 44% of UK citizens of the lowest income rates their health “less than good”. In the middle this figure is 25% and for the people with the highest income the figure drops to 12%.

¹⁸ This latter effect can be better understood by considering that socioeconomic degradation negatively impacts the wellbeing of individuals, even those who are not directly affected by it.

The National Parks sector comprises the public authorities managing the 24 national parks in Italy. The purpose of these public authorities is the conservation of the natural environment, the promotion of biodiversity, and the enhancement of the territory. Since the 92% of the taxpayers who signed for the National Parks expressed a general preference it can be suggested that, for these taxpayers, the preservation of nature reflects the need to be surrounded by an unspoiled environment, as a basic element for improving the quality of life. However, it should be noted that the Volunteering sector includes organizations such as WWF and Greenpeace, which are active in nature conservation on a global scale. Conversely, the activities carried out by park authorities are local, and the benefits are confined exclusively within Italian territory. Therefore, the environmental motivation that has driven the choices of these taxpayers cannot be considered universalist; rather, it is marked by a degree of particularism.

The particularism of the social preferences of taxpayers in the lower income bracket appears to be linked to their need to meet basic necessities: health protection, the quality of the social environment, and the quality of the natural environment in which they live. The varying percentages of choices across the three sectors highlight a clear hierarchy of needs perceived by lower-income taxpayers. Health protection is by far the most prioritized need (82.5% of choices), while the preservation of the socioeconomic environment is deemed essential by only 17% of taxpayers. Meanwhile, just 0.5% consider the quality of the natural environment a priority.

The overall picture that emerges is that the social preferences of taxpayers who allocate the 5x1000 vary significantly across low, middle, and high-income groups. In particular, social preferences with a greater degree of universalism are concentrated in the middle-income bracket, while the tails of the distribution are associated with more particularistic preferences, with a notable difference between high-income and low-income taxpayers. In the high-income bracket, particularism is reflected in choices that indirectly highlight leisure as an important aspect of personal wellbeing, while in the low-income bracket, particularism centres on the need to address fundamental needs for personal wellbeing.

5. Generic versus specific choices

The taxpayer who directs their 5x1000 contribution has the option to either indicate a general preference by selecting the sector they wish to support, or to specify a particular organization by providing its tax code on their income tax return. In this section, we seek to provide insights that may help clarify the factors influencing the taxpayer's choice between a generic and a specific preference.

The voluntary nature of the contribution and the substantial anonymity of the taxpayer mean that the choice of the 5x1000 substantially reflects the personal values of the taxpayer. Schwartz (2016) emphasizes that personal values motivate behaviour, act as standards for evaluating external circumstances, and are typically structured in a relatively stable hierarchical system. Essentially, personal values are foundational to an individual's worldview, shaping both their interpretation of reality and their engagement with society (Mifsud and Sammut, 2023). Research has highlighted that lexicographic preferences often emerge when individuals face decisions involving deeply held personal values (Rosenberger et al., 2023; Lara and Shores, 2024; Hjortskov and Andersen, 2024). These considerations suggest that the choice between a generic and a specific preference can be framed within a lexicographic decision-making context. The moral alignment between the core values represented by the sector as a whole and the taxpayer's personal values constitutes a first-order preference, while the selection of a specific organization emerges as a second-order consideration. Specifically, once the taxpayer has identified the sector most in line with their personal values (generic preference), their second-order preference is shaped by weighing the costs and benefits of the generic choice compared to the alternative of supporting a specific organization. As we will explore further, given the degree of differentiation and refinement of taxpayers' personal values, a critical factor in the decision between generic and specific preferences is the heterogeneity of organizations within sectors.

The share of generic preferences relative to total preferences shows for all sectors a declining trend, which appears to stabilize toward the end of the sample period—suggesting that taxpayers are

becoming more informed and increasingly capable of directing their contributions¹⁹. Despite these transitional dynamics, Table 2—which compares the 2008–2016 subperiod with four sectors to the 2017–2023 subperiod with six sectors—reveals a clear negative correlation between average sector size (measured by the number of organizations) and the average share of generic preferences²⁰.

Table2 Average size of sectors and average share of generic preferences

	2008-2016		2017-2023	
	Size	Generic	Size	Generic
<i>Volunteering</i>	37367	0.081	52923	0.05
<i>Sport</i>	7282	0.2	11989	0.12
<i>Scientific Res.</i>	423	0.34	497	0.29
<i>Medical. Res.</i>	100	0.38	106	0.43
<i>Culture.</i>			143	0.63
<i>Nat. Parks</i>			24	0.91

To rigorously evaluate this negative correlation as a time-invariant property we examine the between-sector effect by performing an OLS regression based on the time-averaged values of the variables across the two subperiods and the entire sample period. The results, presented in Table 3, indeed confirm that the underlying mechanism driving this correlation does not change over time²¹.

Table 3 OLS Regression: Share of generic preferences, dependant variable

Sample		Coeff	Robust St.Err.	p-value	R-squared	N obs.
2008-2023	<i>Number</i>	-0.118	0.035	0.029	0.445	6
	<i>Const</i>	0.540	0.132	0.015		
2008-2016	<i>Number</i>	-0.083	0.021	0.059	0.733	4
	<i>Const</i>	0.373	0.074	0.038		
2017-2023	<i>Number</i>	-0.100	0.032	0.035	0.420	6
	<i>Const</i>	0.520	0.140	0.021		

¹⁹ See Figure 5 in the Appendix.

²⁰ The Municipalities sector is not included, since for this sector, the option for generic preference is not provided.

²¹ Note that, except for 2008, a significant negative correlation also emerges when considering the year-by-year regression across sectors.

In the following, we offer a theoretical explanation for this mechanism consistent with a rational choice of the representative taxpayer. The general purpose of each sector plays a key role in determining its number of organizations. The broader the range of activities aligned with a sector's general purpose, the greater the number of organizations drawn to the 5x1000 opportunity. Consequently, the number of organizations effectively serves as a proxy for the sector's heterogeneity. The Volunteering sector is the most heterogeneous, including humanitarian, healthcare, social promotion, cultural, environmental, and rights protection groups. As a result of this diversity, it also contains the largest number of organizations. The Sport sector, although unified by its focus on amateur sports, also exhibits considerable diversity and ranks second in terms of the number of organizations. The Scientific Research sector includes universities and institutions across various disciplines, including the humanities, making it more heterogeneous than the Medical Research sector, which consists of fewer, more specialized organizations focused on advancing medical knowledge. As a result, Scientific Research has a larger number of organizations. The Culture sector includes museums, archaeological parks, libraries, and foundations devoted to the preservation and promotion of Italian cultural heritage. Its diverse range of activities makes it more heterogeneous than Medical Research. However, compared to the broader scope of Scientific Research, Culture's humanistic emphasis on Italian heritage renders it more homogeneous. Finally, National Parks, comprising 24 parks across Italy, is the most homogeneous, differing mainly by geographic location.

In light of these considerations, we provide an economic interpretation of the negative correlation shown in Table 3. Assuming taxpayers aim for effective use of their contributions, the key factor in choosing between generic and specific preferences is the perceived heterogeneity among organizations within a sector. A specific choice incurs an information cost, so a generic choice is rational if organizations are seen as homogeneous. Conversely, the cost of a generic choice stems from the risk that the taxpayer's contribution may be directed towards organizations misaligned with their social preferences. Thus, the greater the perceived difference between organizations within a sector, the higher the cost of making a generic choice, increasing the likelihood of opting for a specific

choice. The Volunteering Sector shows the highest heterogeneity and the lowest share of generic preferences. In the Sport sector, taxpayers are likely more focused on supporting a specific sport than sports in general. In both sectors, the numerous associations with diverse activities increase the perceived risk of misallocating generic contributions, leading to a preference for specific choices. Between 2017 and 2023, generic contributions averaged 0.05 for Volunteering and 0.12 for Sport. The greater homogeneity in Medical Research, consistently with our theoretical considerations, leads to a 0.43 share of generic preferences in this sector, which is 14 percentage points higher than the share observed in Scientific Research. The comparison of Culture and National Parks with other sectors is limited, as they've only been available since 2017 and 2018, respectively. Still, our theoretical frame provides valuable insights.

To some extent, the Culture sector can be seen as aligned with the broader Scientific Research sector, as both share a common commitment to the value of knowledge. However, contributions to Culture are focused on enhancing Italian cultural heritage within the national territory, while contributions to Scientific Research support global, non-excludable advancements in knowledge. As a result, the Culture sector may be seen as more homogeneous than Scientific Research, leading to a higher proportion of generic preferences—reflected in the respective shares of generic choices: 0.63 for Culture and 0.29 for Scientific Research. Finally, our framework explains the high share of generic preferences in National Parks. Since the parks primarily differ by location, the large proportion of generic contributions suggests that taxpayers are mainly motivated by environmental concerns, while specific contributions reflect more localized interests.

We conclude by examining whether preferences for specific versus generic choices are correlated with differences in taxpayers' economic status. To this end, Table 4 reports the average contribution for each sector, distinguishing between specific and generic choices, and further categorizes contributions by the three income groups—High, Middle, and Low Income—used in the preceding section.

Table 4 Average Contribution for Specific and Generic Choices

INCOME GROUP	<i>SPECIFIC</i>		<i>GENERIC</i>	
HIGH-INCOME	<i>Culture</i>	38.17	<i>Culture</i>	31.11
	<i>Nat. Parks</i>	31.43		
	<i>Sc. Research</i>	29.61		
	<i>Sport</i>	28.85	<i>Sport</i>	29.59
MIDDLE-INCOME	<i>Volunteering</i>	28.63		
	<i>Med. Research</i>	28.59		
LOW-INCOME			<i>Nat. Parks</i>	25.94
			<i>Volunteering</i>	25.86
			<i>Sc. Research</i>	25.37
			<i>Med. Research</i>	23.71

The table highlights that specific choices predominantly originate from taxpayers in the middle- and high-income brackets. Conversely, generic choices are characteristic of those in the lowest income bracket, with the exception of the Sport and Culture sectors, which nonetheless account for only 4% of all generic signatures. To interpret this evidence, we begin by noting that higher income levels are, on average, positively correlated with greater educational attainment. Research indicates that education contributes to the refinement and organization of personal value systems. Higher education is linked to increased cognitive complexity, which may enable individuals to develop more structured and nuanced values (Woznyj et al., 2020; Nikolaev, 2018), often giving rise to worldviews that are more sophisticated and responsive to the complexities of reality. In contrast, lower levels of education may foster the development of narrower and less differentiated personal values, which tend to be associated with more simplistic or naive understandings of the world²².

Building on the above considerations, the greater propensity for specific choice among higher-income taxpayers may reflect more complex worldviews which motivate them to identify, within the sector, the organization that best aligns with their aim of promoting the wellbeing of others in accordance with their personal values. Conversely, the preference for a generic option among lower-income taxpayers may arise from a simplistic and naive worldview, in which the general purpose

²² Considering extreme cases such as religious fundamentalism or political extremism, it becomes clear that rigid and narrowly defined personal values tend to give rise to correspondingly rigid and constrained worldviews.

implied by the sector designation is perceived as fully representing the most important of their personal values. Following this line of reasoning, it is noteworthy that within the Scientific Research sector high-income individuals tend to make specific choices, whereas low-income individuals often rely on a generic choice. On the whole, the choice of this sector likely reflects the perception of knowledge as a fundamental driver of human wellbeing. However, while the generic choice seems to be driven by a naïve view of knowledge as an undifferentiated good, the specific choice suggests that the value of knowledge is filtered through a more sophisticated understanding of reality—one that prompts the taxpayer to identify, within the sector, the organization that most closely aligns with their personal values.

Finally, a separate remark concerns the Culture and Sport sectors, where both specific and generic choices are made by high-income taxpayers. High levels of education may be consistent with the generic choice if the taxpayer associates the general purpose of the sector with an ideal value that transcends the various forms or modes through which it may be expressed. Consequently, if the objective is to advance Italian cultural identity or the educational significance of sport, differentiating between individual activities would be unnecessary, as each equally represents and conveys these values²³.

6. Concluding remarks

In this paper, we propose an investigation of social preferences using a unique data source derived from taxpayers' allocation choices within the 5x1000 initiative. The diversity of social values associated with different sectors allows for an analysis of taxpayers' choices in terms of their social preferences evaluated along the spectrum between universalism and particularism. The sample of taxpayers participating in the 5x1000 initiative is not fully representative of the Italian adult

²³ Basketball requires no less loyalty, discipline, and resilience than cycling, just as the Uffizi Museum is no less representative of Italian culture than the ruins of Pompeii.

population. Nevertheless, it constitutes a substantial segment of civil society, making our findings potentially significant for public policy and social theory.

Firstly, our results show a decline in the degree of moral universalism. The increased economic insecurity and widening socioeconomic inequality since the 2008 financial crisis may have reinforced a stronger focus on personal interest. As people face greater financial pressures, job instability, and uncertainty about the future, they may become more concerned with protecting their own wellbeing. This shift toward self-preservation can reduce empathy and diminish the willingness to extend moral concern to distant others, contributing to a decline in moral universalism.

Since empirical research on moral universalism has primarily focused on cross-sectional analyses, this result encourages a deeper investigation that fully exploits the temporal dimension of the 5x1000 dataset. As a direction for future research, the decline in moral universalism could be examined in more depth by exploiting the heterogeneity within Volunteering, to understand how the solidarity attitude of taxpayers who select an organization in this sector (over 10 million individuals) have changed over time. Future research could also be addressed to the challenging issue of what factors have contributed to shaping the observed evolution in social preferences. Since the sectors eligible for the 5x1000 tax allocation align with specific categories of functional public spending, a possible starting point could be to examine whether the evolution of taxpayer choices over time correlates with changes in the composition of public expenditure. Such an analysis could shed light on whether shifts in taxpayers' allocation preferences reflect broader trends in public policy priorities, perceived effectiveness of state intervention, or changing social needs.

Secondly, universalistic preferences are predominantly found among middle-income taxpayers. In contrast, both lower- and higher-income groups display more particularistic tendencies, though for different reasons. For low-income individuals, particularism often centres on immediate material needs. Among high-income taxpayers, it reflects preferences aligned with lifestyle values, such as the prioritization of leisure and quality of life. These results suggest that moral universalism is not linearly correlated with economic conditions. Rather, it appears to peak within a socioeconomic stratum that

embodies the classic virtues of the middle class—balancing status security with social empathy. This stratum likely still survives within the social fabric, despite rising inequality and growing economic uncertainty having eroded this key pillar of social cohesion and political stability across Western democracies.

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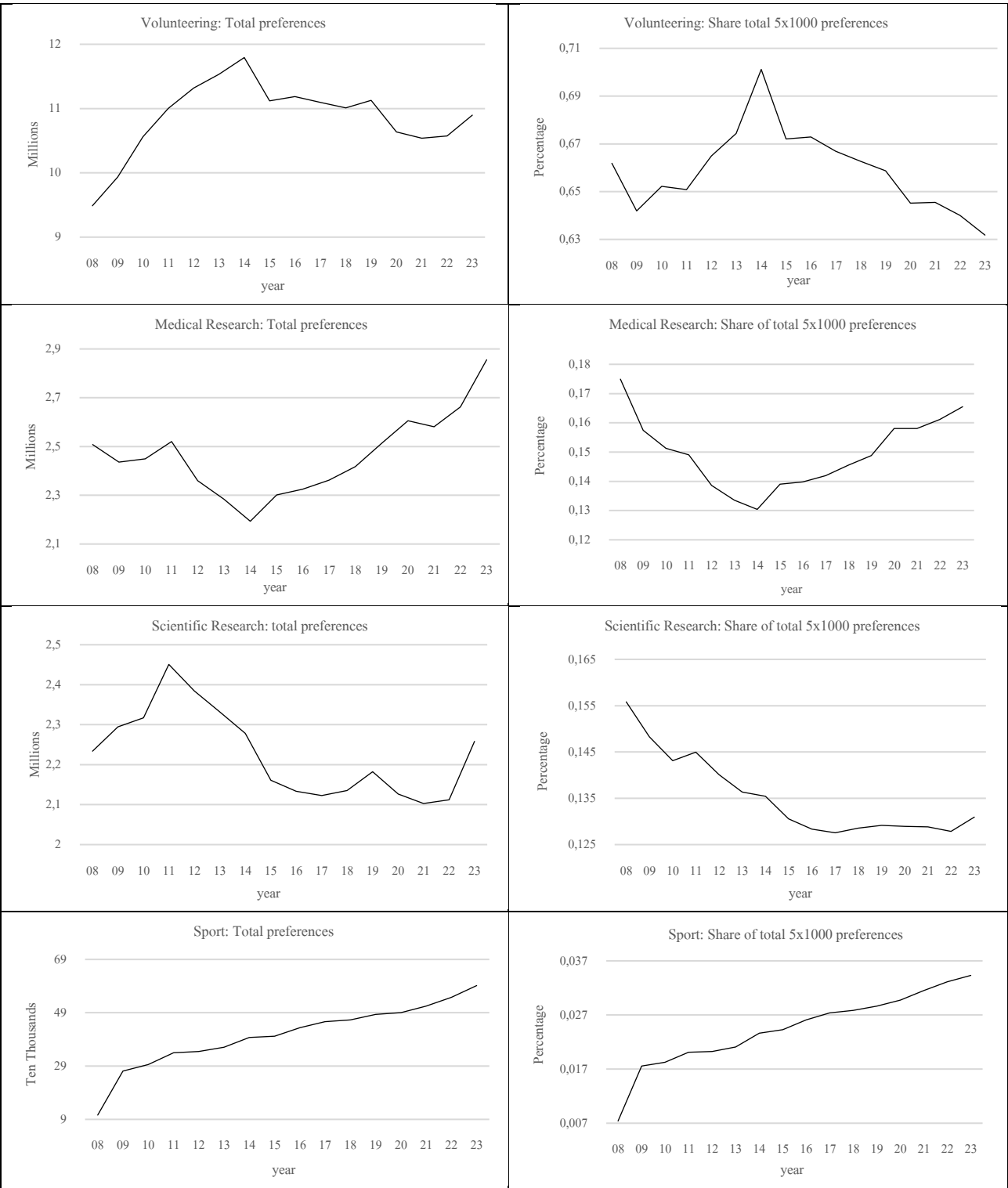
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Appendix

Fig. 4 The Evolution of 5x1000 Preferences



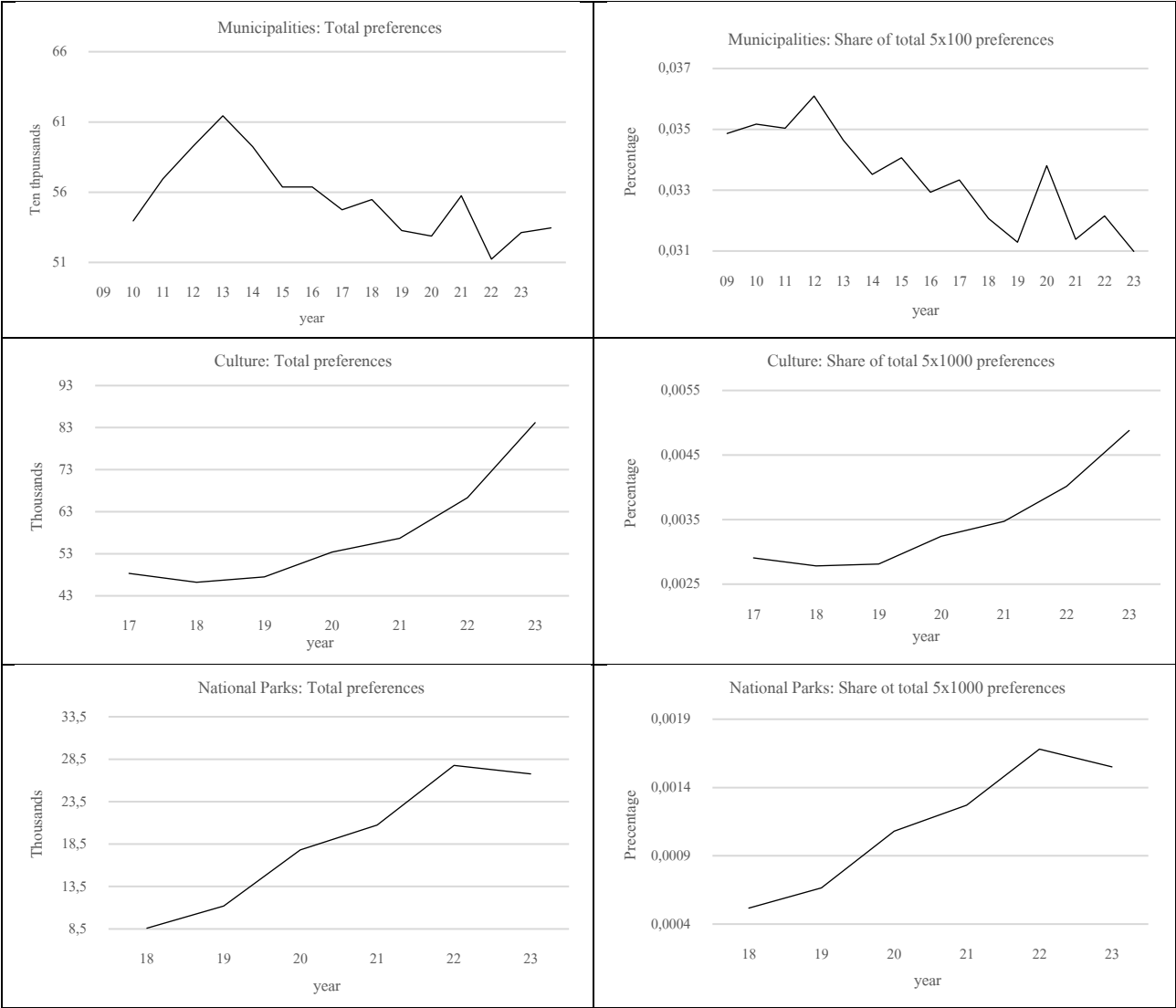


Fig. 5 The Share of Generic Preferences

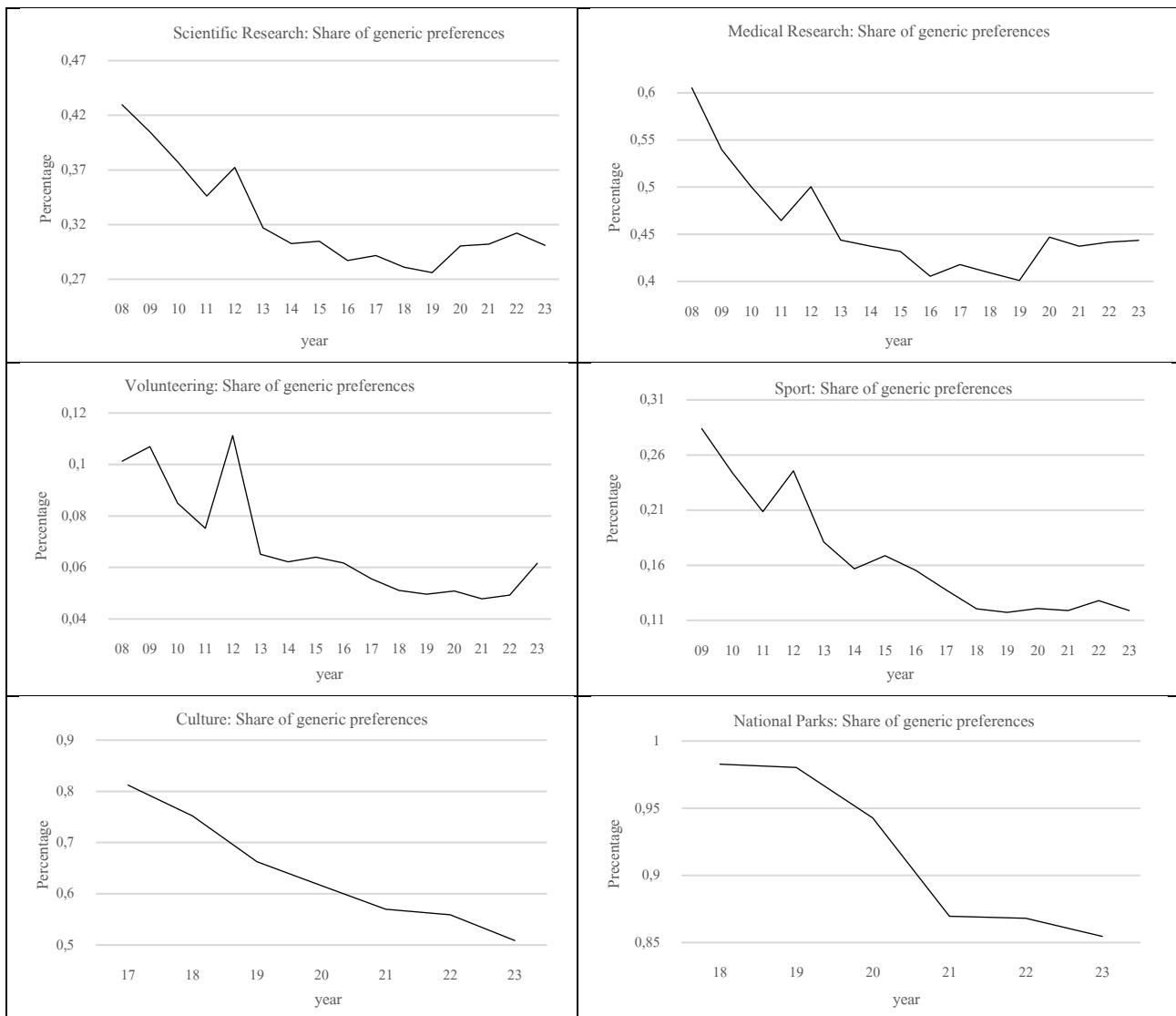


Table 5 Average contributions: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Scientific Res.</i>	16	28.21	2.36	23.84	31.13
<i>Medical. Res.</i>	16	26.34	2.26	22.38	28.54
<i>Volunteering</i>	16	28.43	2.49	23.96	31.88
<i>Sport</i>	16	29.68	3.70	25.46	40.97
<i>Municipalities</i>	15	25.65	2.37	21.60	28.04
<i>Culture</i>	7	33.52	1.99	29.40	35.22
<i>Nat. Parks</i>	6	26.33	1.76	22.97	27.52