Selflessness: An International Comparative Analysis of a Much-Needed Public Value

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ABSTRACT

The purpose of this paper is to investigate how selflessness is to be measured and how it is to be explained.

Adopting an innovative approach to measure selflessness, we assess its prevalence in different regions across the world. We also investigate the factors that explain its emergence and how they interact in predicting it. The level of selflessness differs significantly across the world. Considering the factors predicting it, we find that the likelihood of an individual exhibiting selflessness largely depends on the region they live in. Workplace also plays a crucial role – in OECD countries, working in the public sector increases the propensity for selflessness, but it has the opposite effect in Africa.

The research design involves a multivariate analysis of data from the World Values Survey using both straight-forward regression analyses and binary logistic regression.

The main findings show that the impact of factors traditionally considered important, such as religious affiliation and employment in the public, private, or not-for-profit sectors, varies across regions. These region-specific interaction effects are seen, for instance, in the influence of one's workplace on their propensity for selflessness. Public sector employees are significantly more likely to be selfless than their private sector counterparts. However, while working in the public sector increases the likeli-

hood of being selfless in OECD countries, this relationship is reversed in Africa.

In previous academic studies, little attention was paid to such interaction effects and the impacts of religious affiliation, public sector employment, gender, etc. were assumed to be stable all over the world. This study shows otherwise.

As per **practical implications**, the results of our analyses suggest that research on values needs to be contextualized. This is particularly important when research aims at offering advice to practitioners. Our investigation has shown that the same factors that enhance selflessness in one part of the world may decrease its presence in other regions. A one-size-fits-all approach is therefore not adequate.

Keywords: public values, selflessness, comparative analysis, interaction effects, regional impact

1   Introduction

Bryson, Crosby, and Bloomberg (2014) argued that public values play a fundamental role in the promotion of public governance. According to these authors, although Public Administration tended to hold on to the goals of efficiency and effectiveness, which played an important role for the New Public Management model, the field is now expanding to include "the full range of democratic and constitutional values" (p. 446). This new movement in Public Administration is based on the idea of good governance, which assumes that businesses, NGOs, and the public at large share the responsibility for solving public problems. According to this view, good governance is facilitated when social actors hold democratic values. This movement has striking similarities to the "New Public Administration", the movement put in motion by Dwight Waldo and colleagues in the 1960s, which contested the "value-free" outlook of classical public administration and demanded its return to true democratic values, i.e. participation and social equality (Gruening, 2001). Thus, after the dawn of New Public Management, the movement of Public Value Governance is bringing the normative dimension of Public Administration back into focus.

Public values are not restricted to governmental institutions, but also include the values sponsored by the typical citizen, being ingrained in the fabric of society (Jørgensen and Bozeman, 2007). Thus, public values encompass altruism, responsiveness, honesty, ethical consciousness, and other values that may be expressed in government actions as well in the actions of the public in general. Governments worldwide have endeavored to promote public values within the public service through ethical guidelines, but these efforts have faced challenges in their implementation. A notable example is the Nolan Principles of Public Life in the United Kingdom. Although the public has

shown support for these principles, they were less readily embraced by politicians (Bew, 2015).[1]

From the perspective of the Policy Coalition Framework, the outcome of policies is largely affected by shared socio-cultural values (Sabatier, 1988; Sabatier and Wieble, 2007). While factors determining the outcome of policy collaboration may vary depending on the level of conflict within policy subsystems (Weible et al., 2018), the ability to trust one's partners —a fundamental requirement for collaboration (Axelrod, 1984, 1997; Ostrom, 1998)— requires a considerable level of shared values (Gillespie and Mann, 2004).

Batson and Powell (2003) have argued that altruism is a motivational concept; thus, it may be a cause of prosocial behavior, but the latter may emerge due to factors other than altruism. They define altruism as "(…) the motivation to increase another person's welfare" (p. 463). Moreover, altruism —or *selflessness*— is the opposite of *egoism* (MacIntyre, quoted by Batson and Powell, 2003). We will employ the term selflessness throughout this article to steer clear of the connotations of self-sacrifice often linked to the term altruism. In this context, we embrace the notion that altruism revolves around a commitment to the well being of other individuals, irrespective of its impact on oneself, whereas selflessness denotes a reduced emphasis on one's own outcomes (Van Lange, 2008). Consequently, selflessness does not imply neglecting self-concern, but rather encompasses a focus on the well being of others as part of one's concerns. Thunström et al. (2020) conducted a survey in the United States and observed that the majority of individuals in their sample (70%) were willing to undergo a COVID-19 test to prevent the spread of the virus, even if it meant having to self-isolate. This kind of prosocial behavior represents the anticipated result of individuals holding selflessness as a value, which, in turn, is expected to contribute to good public governance. Given the erosion of public values resulting from organizational changes introduced through the New Public Management model (Jurkiewicz and Mujkic, 2021), the focus back to public values becomes increasingly critical.

A test for public governance capacity on a global scale is the implementation of the Sustainable Development Goals (SDGs) agenda. In 2015, the vast majority of the world's countries (193 out of 195) agreed to implement the Sustainable Development Goals agenda, which includes 17 goals related to several matters, from gender equality to climate change (United Nations, 2015). The need for intense collaboration within and across countries is clear enough: "Achieving the 2030 Agenda requires immediate and accelerated actions by countries along with collaborative partnerships among governments and stakeholders at all levels." (Guterres, 2018, p. 3). In 2021, this challenge remains in place: "A recommitment by Governments, cities, businesses, and industries to ensure that the recovery [from the effects of the COVID-19 pandemic] reduces carbon emissions, conserves natural resources, creates better

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1   One of the most prominent examples illustrating the challenge of holding politicians accountable to the Nolan Principles is the scandal involving celebratory parties that took place at Downing Street 10 during the COVID-19 lockdowns. Subsequently, former Prime Minister Boris Johnson resigned from his position for providing misleading information to Parliament (Castle, 2023).

jobs, advances gender equality and tackles growing poverty and inequalities is a further imperative" (Guterres, 2021, p. 2). At this point, it would be fair to say that the global response to the COVID-19 pandemic has shown that this much-needed collaboration is still a work in progress.

This line of reasoning carries several implications. To attain the SDGs, global collaboration is essential, as stated by the United Nations (2015): "Since this is a universal agenda, fostering mutual trust and understanding among all nations will be of utmost importance" (p. 36). Governments in developed countries have to acknowledge that the problems that developing countries face are also their problems; people working inside and outside governments need to cooperate. Public employees and private citizens need to care about those living in poverty, impacted by climate change, or suffering from any kind of discrimination. Thus, it is plausible to infer that a value in high demand for the implementation of the SDGs is selflessness. Not only intense collaboration and successful governance are needed, but it also should be pointed out that the countries adopting the SDGs agenda have pledged, "(…) that no one will be left behind" (United Nations, 2015, p. 5).

This study aims to investigate whether the public and especially public officials in a range of countries adhere to the value of selflessness and what could explain the variance in this adherence. This information could help in addressing possible weaknesses in governance and collaboration in the implementation of the SDGs. To answer this research question, the following sub-questions are also addressed in the present investigation:

– What is already known from previous research about the determinants of selflessness?
– How to measure the adherence to the value of selflessness?
– How is the frequency of selflessness spread around the world?
– Which factors can explain selflessness?

The empirical analysis is based on the data provided by the World Value Survey, a global network of social scientists studying values and their impact on social and political life (WVS, s.d.). To situate our empirical investigation within the scholarly landscape, the next section examines the theoretical approaches on the role of values in civil society and the public service in particular. In section 3, we describe the research design and methods and, in section 4, we present and discuss the results of the investigation. Finally, in the last section, we put forth the conclusions that can be drawn from our investigation and suggest governmental interventions that can facilitate the implementation of the SDGs.

2 Values, Public Service, and Civil Society

In social sciences research, prosocial behavior, selflessness, and generosity are seen as the opposite of egotism and of the selfish maximizing of one's utility function. As generosity has been the value most frequently studied in the so-

cial sciences, we start our discussion examining the empirical findings of the factors may yield generosity, as well as the limitations involved in measuring it.

Generosity may be defined as that behavior of "(…) freely giving one's time, talents, and treasure to others" (Collett and Morrissey, 2007, p. 23). Machan (1998) sees generosity as benevolence toward others, as a trait in those holding moral virtues, which can be cultivated. According to the author, generous people are benevolent because of their character, not because of deliberation or calculation. Individual generosity corresponds to one's concern about other individuals that is not confined to the utilitarian dimensions of life. Social generosity is the generosity shown towards a cause —the arts, wildlife, sports, the moral education of youngsters, etc.— without the expectation of receiving benefit or self-gratification, and not to fulfill an obligation or duty.

Generosity also has a political dimension. Because benevolence is based on free choice, it can only exist in societies that can guarantee individual freedom:

> No law can guarantee perfect virtue; perfect guarantees are never available. But the law can create the framework within which free and responsible individuals can work together to achieve virtue. Experience has shown that the virtue of generosity flourish best when individuals are free. (Machan, 1998, p. 92)

Kasser (2005, pp. 358–359) defines generosity as "(…) the extent to which individuals share their money and possessions. Generous people are willing to give away or share their possessions and money, and they make life choices that help other people even if their earnings are diminished." Generosity also emerges as philanthropy and helping behavior, such as assisting a stranger in an emergency, donating an organ to a relative, or making a donation to charitable organizations (Bekkers and Wiepking, 2011).

The empirical studies exploring the explanations for selfless behavior are often focused on individuals' willingness to donate money to charitable causes. In these studies, the factor most often mentioned as an explanation for the emergence of selflessness and generosity is religious involvement. Although this association is not found in every context, "[p]ositive relations between church membership and/or the frequency of church attendance with both secular and religious philanthropy appear in almost any article in which this relation was studied" (Bekkers and Wiepkin, 2011). However, it is still an open question whether it is religiosity in itself or rather the involvement (church attendance), the religious context, the specific denomination, and orthodoxy that can be accounted as the explanation for the inclinations to the acting with benevolence towards others (cf. Berger, 2006; Feldman, 2010; Lunn et al., 2001; Wuthnow, 1991).

Education is also frequently mentioned as an explanation for generosity in donations (Bekkers and Wiepkin, 2011; Yen, 2002). However, in this case, there are still doubts on whether it is education as such that results in more generosity, or the type of education. A few studies have shown that *alumni* in social sciences, history, and law are more generous in their giving than *alumni* in eco-

nomics, but not all studies have been consistent regarding these findings (cf. Bekkers and Wiepkin, 2011). In addition, the level of education of donors may be positively associated with donations to some social problems, but negatively associated with others (Bekkers and Wiepkin, 2011; Srnka et al. 2003). Giving appears to be associated with generalized social trust, verbal intelligence, and enhanced confidence in charitable organizations, while education appears to be a mediator in these associations (Bekkers and Wiepkin, 2011).

Studies on the factors influencing the level of generosity also have examined factors such as income (high earners tend to donate more); age (older individuals tend to donate more than the young); marital status and having children (those married with children donate more), and gender (women give to more causes, but men tend to make larger donations) (Bekkers and Wiepkin, 2011). The findings, however, are mixed; there is no clear-cut conclusion on whether these factors can indeed explain the emergence of generosity. Thus, many other factors need to be explored.

We shall point out that selflessness is not always expressed as generosity in making monetary donations. As far as the SDGs are concerned, other aspects of selflessness are more relevant to the success of the agenda. In particular, selflessness among public servants is especially relevant.

Within the discipline of Public Administration, Public Service Motivation has been the most influential approach to the role of values in public service (Perry and Wise, 1990). At the center of the theory stands the proposition that individuals expressing higher levels of values associated with the dimensions of "self-sacrifice", "compassion", and "attraction to public policy-making" tend to seek employment in governmental organizations. In their review of 20 years of PSM research, Perry, Hondeghem, and Wise (2010, p. 683), argued that "[p]ublic administration research on this proposition is limited but generally supportive". However, as in the sociological research on generosity, they had to acknowledge that the results are mixed. Perry (1997) sought to find out whether parental socialization, religious socialization, professional identification, political ideology, and individual demographic characteristics could explain the level of PSM found in individuals. His initial hypothesis was that the values associated with PSM are developed during initial socialization experiences (family and religion) and through professional identification. He tested these hypotheses through five regression models and found that all yielded weak regression coefficients (ranging from 0.18 to 0.07). For the most part, the PSM levels lacked a strong explanation through early socialization, religiousness, or professional identification. Further empirical studies indicated that the organizational context was a stronger explanation for variation for PSM levels. Kjeldsen and Jacobsen (2013) performed a rare longitudinal study and found no evidence that PSM levels had influenced career choices. They did find that PSM declines more among individuals who entered the private sector than for those who choose to work in the public service, a result suggesting that socialization in the context of organizations was the main factor influencing the levels of PSM. This hypothesis was further sustained

by an investigation conducted by Camilleri (2007). He performed a study to investigate whether personal attributes, role states (conflict and ambiguity due to roles within organizations), job characteristics, employee-leader relations, and employee perception of the organization affected PSM. He noted that positive employee-leader relation had a positive association with PSM, and the factor was relatively strong for the dimensions "commitment to the public interest", "attraction to policy-making" and "self-sacrifice". In addition, Camilleri found that positive job characteristics —assumed to increase job satisfaction— also presented a positive association to PSM levels. The role of context in boosting or decreasing PSM is indirectly reinforced by studies focusing on Self-Determination Theory, which has shown the importance of context in the promotion of intrinsic motivation (Andrews, 2016).

The growing popularity of PSM within the field of Public Administration prompted researchers to investigate other social and psychological phenomena, such as altruistic motives, work-related preferences, and prosocial behavior (Bozeman and Su, 2015). These studies have shown that PSM values were not exclusive to public employees but were disseminated in the population at large (Perry, Hondeghem, and Wise, 2010; Bozeman and Su, 2015). Despite the abundance of empirical investigations on PSM, Bozeman and Su (2015) note that more investigations taking the concept as a dependent variable are in need.

One way of dealing with the dependent/independent problem in PSM is to establish a more precise definition of values. Bozeman (2007, p. 117) specified a value as "a complex and broad-based assessment of an object or set of objects (where the objects may be concrete, psychological, socially constructed, or a combination of all three)". The assumptions accompanying the definition are: "(1) values expressing evaluative judgments; (2) values having both cognitive and emotional aspects; (3) values being relatively stable; (4) values having strong potential to affect behavior; (5) values changing (if at all) only after deliberation; (6) values helping define one's sense of oneself" (Bozeman, 2007, p. 17). He argues that "public values" correspond to the normative consensus about: "(a) the rights, benefits, and prerogatives to which citizens should (or should not) be entitled; (b) the obligations of citizens to society, the state, and one another; and (c) the principles on which governments and policies should be based" (p. 132).

Bozeman (2007) argues that a society's public values do not correspond to the aggregate sum of individual public values. However, he ends up not providing clues as to how one could assess public values as a feature of a given society as a whole. He acknowledges that one way of identifying the presence of public values is through public opinion surveys, which aggregate individual opinions to represent the opinion of the population.[2] Bozeman sees that values carry an emotional component. As we know, since ancient times, politicians have played the emotions of the public to gain support to certain policies; this may be seen as both legitimate and manipulative. However, pol-

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2   While public opinion surveys can be used as a method to examine values in a large population, the method is without its drawbacks. For an exploration of the limitations of public opinion surveys and strategies to address them, see Perrin and McFarland (2011).

iticians also seek to persuade the public to support the values themselves. Civil society's institutions also compete with one another to reach the "heart and minds" of the public and governmental decision-makers. Thus, different values are offered to the public and the "competing values" are then sorted out through elections (Bozeman, 2007). However, elections do not directly express the public values that the majority of the population holds. As we know, elections more often express how well or how bad the incumbent government is doing, and not which values the population holds. Thus, when it comes to the legitimacy and effectiveness of public policies, elections cannot provide adequate answers.

The idea that the population at large holds public values —as the concept of PSM has mostly assumed— dovetails with the idea of "public value governance". Bryson, Crosby, and Bloomberg (2014) regard as "public values" those values associated with democracy and the common good. They argue that public administration is changing in "response to the challenges of a networked, multi-sector, no-one-wholly-in-charge world and the shortcomings of previous public administration approaches" (p. 445). In this dynamic context, public administration is seen as the main warrantor of public values, but citizens, businesses, and nonprofit organizations also are required to participate in problem-solving, a perspective that follow the steps of the governance/network approach (Peters and Pierre, 1998; Rhodes, 1997; Vigoda, 2002).

Another attempt to clarify the definition of values is Schwartz's Theory of Basic Values (Schwartz, 2012). He argues that values present six characteristics: (1) values are beliefs that generate feelings (affection); (2) values move individuals to pursue goals that they regard as desirable; (3) values transcend specific contexts and apply to a broader array of situations; (4) values serve as standards or criteria for action, which are not necessarily conscious to the actor; (5) there is a hierarchy of values – some values are more important than others; (6) because values may conflict with one another, the relative importance of each value is what can move individuals into action. According to Schwartz (2012), "basic values" are values broadly shared among people of different cultures. Among these is "universalism", i.e. the desire to pursue the goals of "understanding, appreciation, tolerance, and protection for the welfare of *all* people and nature" (p. 7). Schwartz (2012) also notes that values can be bundled as dimensions; benevolence and universalism form the "self-transcendence" dimension, which is in opposition to the "self-enhancement" dimension, comprised of values "that emphasize the pursuit of one's own interests and relative success and dominance over others" (p. 8). In Schwartz's view, conflicting values are not mutually exclusive; individuals are likely to pursue all the ten basic values, but the more importance one attaches to one dimension, the less one attaches importance to the opposing dimension.

We can say that public values (Bozeman, 2007) and universalism (Schwartz, 2012) are analogous. Public values entail one's caring for the welfare of *all* individuals. On the other hand, the concept of generosity is not necessarily universal. Some individuals can be generous to family and friends, but still

have little regard for strangers. Even considering that the research discussed above assumes generosity as the willingness to help individuals other than one's kin, the concept of generosity still misses the public character that the concepts of public values and universalism have strived to emphasize.

To bring about social change it is not only necessary that public servants at all levels of government share the values that would make this social change possible, but it is also necessary that a significant part of the population share these same values. As we argued above, the SDGs bring high demands on collaboration between countries and among the several stakeholders involved. Thus, one can expect more difficulties to implement de SDGs in countries where the needed values —especially selflessness— are in short supply. Thus, it is relevant to know what factors are associated with selflessness and whether these factors may be fostered by governmental action.

3   Methods

The empirical analysis of the present investigation is based on data provided by The World Values Survey (Inglehart et al., 2014). Although a more recent WVS survey has been released (Haerpfer et al., 2022), the questionnaire for wave 7 has excluded some variables that are relevant to assess selflessness. Because socio-cultural features tend to change only on the long run, we assume that the data for wave 6 is still capable to show differences between world regions. The WVS collects data about values and political attitudes, such as support for democracy, tolerance of foreigners and ethnic minorities, support for gender equality, attitudes toward the environment, work, family, and politics, among other topics. The survey in question (2014) collected data in 60 countries, composing a sample of 85,000 respondents.

The first issue that this research tackles is establishing a reliable way of measuring selflessness. The Schwartz Value Survey scale uses items such as "It is important to this person to do something for the good of society" and "It is important to help people living nearby; to care for their needs" to measure self-transcendence (altruism). On the other hand, items such as "It is important to this person to be rich; to have a lot of money and expensive things", "It is important to this person to have a good time; to 'spoil' oneself'", and "Adventure and taking risks are important to this person; to have an exciting life" are used to measure self-enhancement (egoism) (Fontaine et al., 2008; Schwartz and Boehnke, 2004; Spini, 2003; Welzel, 2010). As seen above, according to Schwartz (2012), self-enhancement (power, achievement) is in opposition to self-transcendence (benevolence, universalism).

A problem in this kind of measurement is that the survey questions ask whether and to what extent the statement in each item applies to the respondent. This measures the identification with such values but does not tell us anything about the hierarchy values in the value system of the respondent. Rokeach (1973) noted that a value change entails a change in the whole system of values, i.e., a change in the importance of one value would entail a change in

the whole hierarchy of values. Thus, the best way to investigate which values are central to an individual is simply asking which values are important for the respondent.

The WVS includes a question that allows identifying the values regarded as important by the respondent. It is stated as follows:

> "*Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five!*
> V12. Independence
> V13. Hard work
> V14. Feeling of responsibility
> V15. Imagination
> V16. Tolerance and respect for other people
> V17. Thrift, saving money, and things
> V18. Determination, perseverance
> V19. Religious faith
> V20. Selflessness[3]
> V21. Obedience
> V22. Self-expression"

The response categories are 'Mentioned' and 'Not mentioned'. The WVS interviewer does not mention to the interviewees what are the possible response options; the respondent has to choose spontaneously which values are important in children's upbringing.

The WVS 2014 survey shows that 19% of the respondents do mention selflessness as one of the most important qualities to encourage in children while simultaneously saying that they do not identify with the statement "It is important for this person to help the people nearby; to care for their well-being" (WVS questionnaire, V74B).[4] This is a strange outcome, possibly indicating a misunderstanding of the question or that the respondent is not answering the questions carefully. On the other hand, 36% of the respondents that do identify with the statement nevertheless do not mention selflessness as one of the most important qualities to encourage in children. Although this result appears to be more reasonable —people can see selflessness as an important quality to encourage in children but do not see themselves as selfless—, it also indicates a problem in identifying how individuals rank values.

To obtain a more precise measurement of the centrality of selflessness, we opted to examine two groups: Group A – individuals who mention selflessness as one of the most important qualities to encourage in children *and* identify with the statement that it is important to help people living nearby, to care for their needs (these respondents get score '1'); and Group B – individuals who do not mention selflessness as one of the most important values in children's education *and* do not identify with the statement that it is important

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3   This variable is translated into Spanish as *generosidad*, or "generosity" in English.
4   Possible answers to this statement include: "very much like me", "like me", "somewhat like me", "a little like me", "not like me", and "not at all like me". The WVS questionnaire is available at http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp

to help people living nearby, to care for their needs (these respondents get score '0'). Group A respondents are regarded as clearly "selfless", while respondents in group B are regarded as clearly "selfish". The frequency of selflessness and selfishness are presented in Table 1; it has also added a column showing the percent of individuals —named "doubtful"— that includes all the other respondents that are not in groups A or B.

Table 1. Frequency of selflessness

Region	% selfless	% doubtful	% selfish	N
Central and Eastern Europe	1.6	4.5	93.9	8,708
OECD*	7.8	9.9	82.3	7,271
Asia	12.2	12.2	78.0	15,674
Africa	15.6	11.8	72.6	6,135
Latin America	17.2	10.7	72.1	7,736
The Middle East and Northern Africa	29.0	27.1	43.9	11,274
Total	**14.4**	**12.7**	**72.9**	**56,798**

* Obs.: Data exclude those countries included in the other categories, such as Poland (Eastern and Central Europe) and Turkey (Middle East).

This measurement shows that, on average, 14.4% of people all over the world can be classified as selfless. However, there are huge differences between regions. Whereas 29% of the respondents in the Middle East and Northern Africa region are classified as selfless, only 1.6% in Eastern and Central Europe and 7.8% in the OECD countries are selfless. In Latin America, Africa, and Asia about 15% of the population can be classified as selfless.

In general, selflessness (or generosity) is among the least often mentioned qualities among the five most important to be encouraged in children in developed countries. In Germany, only 5.7% of the respondents do mention selflessness. In contrast, more than half of the respondents in India do mention it. Countries that are in the middle position include: USA (33%), Brazil (32%), China (29%), and Russia (23%).

Economic superpowers —USA, China, Russia, and Germany— show the lowest adherence to selflessness. On the other hand, developing countries appear to be holding on to universalist values, as far as selflessness demonstrates.

Our next step is to run first a straightforward logistic regression analysis to estimate the relationship between explanatory variables and the single output binary variable, i.e. selflessness without controlling for interaction effects. We then follow with logistic regression analysis to examine the interactions

effects between the explanatory variables on selflessness. The results and discussion are presented in the next section.

4   Outcomes of the analyses

As mentioned above, most empirical studies on explanatory factors for generosity were based on data about individuals making donations. This method has several limitations, including the fact that studies using it rarely allow comparative studies. Departing from the approach of measuring the centrality of selflessness on one's value system, we then select variables from the WVS that are commonly mentioned in the academic literature in the fields of public administration and sociology and, using straightforward regression analysis, we test these as possible explanations for "selflessness" (dependent variable). The list of possible explanatory factors and the correlation results are presented in Table 2.

Table 2. Straightforward binary regression analysis of known factors on selflessness

Independent variables	B	Sig.	Exp(B)*
Being non-religious (reference group is religious)	-.41	.00	2.13
Women (reference group is men)	.22	.00	1.24
Public sector (reference group is employment in government or public institution):			
Private sector	-.47	.00	.63
Not-for-profit sector	-.75	.00	.47
Autonomous/informal sector	-.53	.00	.59
Supervisory role	.17	.00	1.19
Highest educational level	-.10	.00	.91
Scale of incomes	.04	.00	1.04
Age	-.01	.00	.99
Size of town	.03	.08	1.03
Constant	-.28	.00	.76

* Exp(B) refers to the odds ratio.

To understand the outcomes of this analysis, the B in the table refers to the strength of the relation between for instance being non-religious and selflessness with being religious used as the reference group. It appears to be a negative relation. This implies that being non-religious is a strong predictor for selfishness. This is no co-incidence, but a statistically significant relation. The probability of this relation being due to chance is 0.00 (sign.). The last column

gives the odds ratio (exp. (B). It appears that being non-religious results in more than doubling the probability of also being selfish, as the odds ratio is 2.13.

Coefficient B shows the strength a given feature/variable has in predicting selflessness when compared to not having this feature. For instance, being non-religious has a strong negative correlation to selflessness when being religious is the reference group (B = -.41; sign. 0.00). This means that being non-religious is a strong predictor for selfishness (the opposite of selflessness). The last column presents the odds ratio, indicating the probability for an individual holding a given feature/variable being selfish/selfless —depending on whether B shows a negative or positive correlation— as compared to not having this feature. Thus, the chances for one individual being non-religious and selfish is more than twice the chances of being religious and selfish [Exp.(B) = 2.13].

The analysis shows that religion, gender, income, being a supervisor, and working in the public sector all have a positive impact on selflessness. *Ceteris paribus*, religious people are more selfless than non-religious people, women are significantly more selfless than men, and people in a supervisory role are more selfless than those who do not hold such a position. The odds of being selfless are more than twice as high if somebody is religious, 24% higher for women than for men, and 19% higher for people in a supervisory role [see the last column in Table 2]. In addition, the odds of being selfless drop significantly when the respondent is not working in the public sector. In the private sector, the odds of being selfless are only 63% as compared to the odds of being selfless when working in the public sector. Age has a tiny impact on selflessness, as does education. The size of the town in which the respondent lives does not have any impact on selflessness.

Next to being religious and female, the sector in which respondents work seems to have the largest effect on the odds of being selfless; the odds are low in the private sector but especially low in the non-profit sector.

To obtain more precise outcomes on the factors responsible for the emergence of selflessness, we conducted an additional analysis to examine possible interaction effects. As the dependent variable 'selflessness' is a dichotomous variable, we continued by analyzing the interactions using binary logistic regression analysis.

It is important to underscore that in the previous analysis we assumed a *ceteris paribus* situation: the straightforward binary regression analysis assumed no interaction effects. The binary logistic regression analysis, however, shows that interaction effects have a huge impact on being selfless or not. The results of this advanced analysis are presented in Table 3.

First, we added the region in which the respondents live; this had a great impact on being selfless. The respondents in the Middle East and Northern Africa region are by far the most selfless, while the respondents from Central and Eastern Europe countries are the most selfish. Adding the region one lives in the logistic regression model results in several other factors — such as age, education, and scale of income— losing their effect on selflessness.

For instance, the effects of the sector of employment and being religious on being selfless diminish in strength when controlled for region. In the previous analysis, not controlling for the region, individuals working in the private sector were significantly more selfish than people working in the public sector, with people working in the not-for-profit and informal sectors being the most selfless. Controlling for the region, changes these relations significantly. In this case being religious only increase the odds of being selfless with 26% and it seems to matter hugely what religion one adheres to. Being Hindu or Muslim does strongly increase the probability of being selfless, while this is opposite for Catholics and Protestants. That is, if one does not distinguish where those Catholics live. The odds of being selfless are huge for Catholics in OECD countries, Latin America, and Africa compared to Catholics in Asia and Eastern Europe. In Africa, we see a huge difference in selflessness comparing Catholics and Protestants. As to the sector respondents work in, the odds of being selfless are now higher for people working in the not-for-profit or informal sector compared to people working in the public sector.

It is important to highlight that the effect of working in the public sector on selflessness varies over regions. The effect thereof is strengthened in the OECD while smaller in Africa. Religiousness also has a strong effect on selflessness, but, in this case, once again, several interaction effects are noticeable. First, the religious denomination matters. The effect of Catholicism on selflessness is strengthened when combined with living in Africa, Latin America, and especially the OECD. In Africa, the effect of Catholicism on being selfless is opposite to the effect of being Protestant: living in Africa and being a Protestant diminishes the odds of being selfless. This could be because in some African countries —like South Africa— Protestantism is the religion predominant among the previous colonizers and Catholicism the religion of many black Africans. A huge effect of religion on selflessness is also seen in the combination of living in Asia and being a Hindu; this more than quadruples the odds of such a person being selfless.

In general, this model shows a good performance in predicting who is selfless, according to the criterion described at the beginning of this section. Of all the 4,199 respondents being selfless (group A data), 19% were also classified as such based on the predictors, whereas none would be classified as selfless without the predictors. As to the 9,697 selfish people (group B data), without any predictors, all respondents in this group would be correctly classified as selfish, because they are also the majority. Using the predictors increases the probability of wrongly classifying them as selfless by only 2.6%.

Table 3. Advanced analysis on selflessness

	B	Sig.	Exp(B)
Regions: reference group is CEE			
OECD	.92	.00	2.50
Asia	1.79	.00	5.98
Latin America	2.48	.00	11.94
Africa	2.81	.00	16.64
Middle East and Northern Africa	4.20	.00	66.84
Sector of employment: reference group is working in the public sector			
Private sector	-08	.13	.91
Not-for-profit sector	.23	.03	1.26
Autonomous/informal sector	.24	.00	1.28
Working in public sector in OECD	.36	.02	1.44
Working in public sector in Africa	-.26	.00	.77
Size of town	.04	.00	1.05
Importance of religion	.23	.00	1.26
Denomination			
Hindu	.87	.00	2.38
Muslim	.65	.00	1.92
Protestant	-.59	.01	.56
Catholic	-.40	.00	.67
Religions within regions			
No religion in OECD	1.19	.00	3.30
Catholic in OECD	2.13	.00	8.38
Catholic in Latin America	1.65	.00	5.20
Catholic in Africa	1.76	.00	5.80
Protestant in Africa	-.77	.00	.46
Constant	-3.29	.00	.037

Exp(B) refers to the odds ratio.
Cox and Smith R square = .16 Nagelkerke R square = .27

5   Discussion and conclusions

The implementation of the SDGs, being a universal agenda, requires from governments and stakeholders a great level of commitment to a common cause. Moreover, this common cause demands that all those involved in the endeavor join together to promote the betterment of all people, as "no one will be left behind" (UN, 2015, p. 5). In this study, we sought to verify whether the public and, especially, public servants hold the values needed for the implementation of the SDGs. As selflessness is a fundamental value to promote commitment to such an encompassing a common cause as the SDGs, it was put at the center of our analysis. We also investigated the factors that could explain the emergence of selflessness. We should highlight here that selflessness is assumed as a moral virtue that can be cultivated (Machan, 1998).

Previous studies have investigated the effects of factors such as religion, education, level of income, among others on generosity. However, these investigations measured generosity through individuals' willingness to donate to charities and other causes. Our study took a more direct approach by measuring selflessness as the simultaneous response to two questions present in the questionnaire used in the 2010-2014 World Values Survey (Inglehart et al., 2014). These data also allowed us to test the effect of several factors on selflessness, including factors that are not normally considered in similar studies, such as the sector of employment, position at work, and, more importantly, the region of the world one lives in.

The results of our analysis show that the region of the world has a huge impact on the probability of one being selfless or not. As seen in Table 1, a very small percentage of the population in Central and East European countries can be regarded as selfless (1.6%), while individuals living in the Middle East and Northern Africa are the most likely to be selfless (29%); individuals living in OECD countries, Africa, Asia, and Latin America stand in between (7.8%, 15.6%, 12.2%, and 17.2%, respectively). Within the OECD, selflessness is somewhat more frequent than in Central and Eastern European countries, but still, only a small minority of the population may be regarded as selfless.

Our study also identified strong interaction effects. As shown in the previous section, the region a person lives in has a great impact on being selfless to the point of erasing the effect of factors such as age, education, and level of income. The combination of working in the public sector in an OECD country increases the odds that the person in question is selfless while working in the public sector in Africa has the opposite effect.

The results of our analyses demonstrate that research on values needs to be contextualized. This is particularly important when research aims at offering advice to practitioners. Our investigation has shown that the same factors that enhance the odds of finding selfless people in one part of the world may decrease those odds in other regions. One size does not fit all.

Nevertheless, the effect of place of work was shown to have a considerable effect on the odds of one being selfless, irrespective of the region one considers.

It is one of the few factors whose individual effect is resilient in this way. People working in the public sector are significantly more likely to be selfless than people working in the private sector, but the effect is even stronger if one is working in the not-for-profit or the autonomous/informal sector. However, as seen above, while working in the public sector increases the odds of one being selfless in the OECD countries, this factor decreases the odds if one is in Africa.

The adherence to religion also has a strong effect on selflessness. In itself, this is positively related to selflessness. In the OECD countries, Africa, and Latin America, there is an additional positive effect of Catholicism. This additional effect is, however, absent in other regions, like Central Eastern Europe or Asia. As to specific denominations, Hinduism and Islam seem to have a much stronger effect on selflessness than Protestantism, or Catholicism.

We recognize that there are limitations associated with the way our investigation chose to measure selflessness. Indeed, our approach is novel for it combines the importance people attach to caring for one another with the centrality of selflessness within their value system. Bardi et al. (2009) proposed that analyses of value change should make a distinction between mean-level changes and rank-order changes. However, in our study, we did not investigate possible value changes over time; we performed a "snapshot" analysis of the concept of selflessness within the short period comprising the collection of data for the 2010-2014 WVS wave. Nevertheless, using our measurement and conducting a multivariate analysis, allowed us to correctly classify 77% of the WVS sample as selfish or selfless individuals.

How can our findings aid the implementation of the SDGs? The main lesson is that strategies to foster the values associated with the agenda should be tailored to each region. In a more specific fashion, our results suggest that public servants in Africa could benefit from training or mentoring programs that show the collective benefits associated with the SDGs. In contrast, public communication programs appear to be especially important in Central and Eastern Europe. Although scholars and practitioners have long been skeptical of the effectiveness of training for value change, there is evidence that benevolent values can be enhanced through specific interventions (Arieli et al., 2014). In addition, it has been argued that the right type of training, not training *per se*, is capable of promoting change within organizations (Arthur et al., 2003; Garofalo, 2003). Moreover, recent research in Public Service Motivation has shown that public values are dependent on context (Andrews, 2016). We should also note that value change is, in itself, a moral commitment. Adorno (1963/1998) has put this commitment in a dramatic, though truthful, manner: "The premier demand upon all education is that Auschwitz not happens again" (p. 191).

While religion is an important factor in enhancing selflessness, religiosity is a very personal matter. Therefore, governments should refrain from engaging in any religious discourse. However, the same values that religious people embrace can be promoted in secular terms. Governments regularly promote public campaigns to tackle social problems such as car accidents, HIV prevention, substance abuse, racial discrimination, etc. by reinforcing values such as

self-respect, family bonds, community life, solidarity, and egalitarianism. It should be the case to use governments' communication powers to explain to the public why the SDGs are worth pursuing, in a way that the agenda's goals are associated with the values that underpin them. As Schwartz (2012) has argued, the same basic values appear to be present everywhere in the world; the differences are regarding which values predominate over others in different cultures or even in different individuals. Therefore, governments may use public communication tools to enhance positive values that are already present in every individual.

Considering the extent and the great commitment that the SDGs represent to the vast majority of the world's countries that signed up for the task, this also implies that more investigations should follow through, providing specific insights on the more effective ways to promote the values that can sustain this universal agenda.

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