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# The Centrality of Prosocial Values in Work Motivation among Public and Private Sector Employees

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## ABSTRACT

**Purpose:** The paper proposes an alternative measure of the importance of prosocial values in the work motivation of public and private sector employees. Hitherto research measures the importance of values by taking them as autonomous entities or using a factorial design, asking employees whether they adhere to a certain value or not.

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**Design/methodology/approach:** Based on a psychological theory on values and motivation, the paper argues that it might be preferred to measure the centrality of prosocial values amidst other job motivators in the value system as a whole to assess the degree of prosocial values' dominance.

**Findings:** The application of such a measure in a longitudinal and international comparative analysis shows that differences in the centrality of prosocial values make the difference between employees in the public and private sectors much more pronounced than usually found in the relevant literature. This finding does not disappear when the research model includes the nature of the job, individual characteristics, and societal features, such as the GDP per capita and the dominance of individualism over collectivism in society.

**Significance:** This research also shows that differences between employees adhering to intrinsic, extrinsic, and prosocial motivations are relative, as almost all employees – irrespective of where they work – assess values of job security and having an interesting job to be the most important work motivators.

*Keywords:* prosocial values, job motivation, comparative analysis, International Social Survey Programme (ISSP)

*JEL:* 100

## 1 Introduction

This article intends to contribute to the discussion on work motivation in two ways. First, it proposes a novel way of measuring the adherence to prosocial values. This proposal is based on psychological research on values and motivation (Rokeach, 1973) in which not the adherence to such values as such, but rather the centrality thereof amidst a range of values is judged to be important. Second, this paper intends to contribute to the discussion about the explanatory power of pro-social values amidst other work motivators.

The values that motivate employees in their work have received enormous attention (Kanfer et al., 2017; Van den Broeck et al., 2021) as they are strongly related to performance, job engagement, and innovative practices by employees (Cerasoli et al., 2014; Grant and Berry 2011; Judge et al., 2001; Ng et al., 2012; Papaioannou et al. 2006; Vallerand 2007; van Egmond et al. 2017). Theories about intrinsic and extrinsic motivation (Grant and Berry, 2011), the importance of prosocial values (Abid et al, 2018), and the self-determination theory (Deci and Ryan, 2008) have resulted in widespread attention and a continuous flow of research.

Intrinsic motivation refers to motivation to behavior that is driven by internal rewards because these people judge the behavior to be important in itself. Extrinsic motivation results in behavior that is driven by external rewards such as money, fame, grades, and praise. Prosocially motivated employees distinguish themselves by their desire to create value in their communities through behavior that helps others and alleviates the suffering of people who face

challenging circumstances (Williams and Shepherd, 2010). The expectation is that especially employees in the public sector have a prosocial motivation, as it is in the nature of the public sector to do good for society, to develop policies to resolve societal problems, and to take care of those people who are unable to solve their problems on their own (Perry, 1996; Denhardt and Denhardt, 2007).

The empirical research into this subject is often based on survey questions, in which the respondents are asked to choose a point on a 3-, 5- or 7-point Likert scale indicating whether they judge an item that is indicative of work motivation to be not important at all or at the other extreme of utmost importance, or somewhere in between. At the aggregate level, one can then establish what kind of motivation is dominant within an organization.

At the individual level, groups of respondents can be distinguished given the similarity in their answers, or the researcher uses a factorial design to investigate the degree to which several items are indicative of the same kind of motivation and to measure whether respondents score high on items indicative of intrinsic motivation, on the items indicative of extrinsic motivation, and items indicative of prosocial motivation.

Such measures are used to analyse the predictive power of the constructs regarding performance, job satisfaction, stress, the inclination to innovate, work engagement, the specific kind of training needed, the kind of supervision needed, or whatever the researcher is interested in. The work motivators can also be used as the dependent variable with the analysis aimed at finding explanations for the scores by independent variables such as the nature of the work, the kind of socialization, the type of leadership, organizational culture and structure, gender, age, et cetera.

This article argues that there are good arguments to take an alternative approach in the measurement of values indicative of work motivation. We suggest a measurement in terms of the mutual relative importance of such values taking the centrality of values in the value-system as a whole as crucial, instead of measuring the importance of each item separately or as items in factor analysis.

Therefore, in this article we aim to explore two research questions:

1. How does the measurement of the centrality of prosocial values within the value system of individuals compare to current measures of work motivation in which the importance of prosocial values as such is measured?
2. What does this kind of measurement imply for the impact of such values in causal analyses?

In section 2 we present the theory on which we base our proposal and we explain how work motivation is measured using this approach. Subsequently, we will apply this measure in a multivariate analysis to see how this approach impacts outcomes in comparative research. In section 3, we give an account of the empirical data used, and of the methods used for the statistical analysis

thereof. This is the prelude to the presentation of the outcomes of comparative research into such values. The article ends with a discussion of the outcomes and conclusions.

## **2 Theoretical explanations for the adherence to prosocial values**

Prosocial values are said to be especially important in the public sector as the work done by public employees is distinctive from the work done in the private sector (cf. Perry and Wise, 1990; Ranson and Stewart, 1994). Perry and Wise (1990) talked about the psychological dimension and the need for a work motivation to be based on a commitment to the public interest, compassion, and, if necessary, even self-sacrifice. They called this public service motivation. Ranson and Stewart (1994) talked about contextual differences, contending that public officials need to understand the political process and have to work with elected politicians, need an understanding of the different roles of citizens, need to work amid public pressure and protest, and need to have a feeling for the management of rationing, influence, multidimensional performance, and the wider responsibilities to a changing society (Pollitt, 2016, p. 14).

In public administration literature, it is assumed that within the public sector, prosocial values are values associated with the public sector's contribution to society, values associated with the transformation of interests to public decision making, values associated with the relationship between the public administration and politicians, values associated with the relationship between public administration and its environment, and values associated with intra-organizational aspects of public administration (cf. Jørgensen and Bozeman, 2007; Perry, 1996; Denhardt and Denhardt, 2007).

In this article, we not just measure what people judge to be important in their work, but rather what is central in their work motivation. In existing research, the results of such surveys are used to see what items are most often mentioned as important. Or the researchers use a factorial design to see which items indicative of work motivation are mutually related and whether the factors found reflect the types of work motivation as suggested in theories on work motivation (for instance, intrinsic and extrinsic motivation). Such measurement is known as mean level measurement as it is based on the mean scores and standard deviation of each item separately.

Recent psychological reasoning recommends distinguishing between such mean level importance of separate values and rank ordering values in value systems. In rank order measurement the relative importance of items indicative of work motivation is crucial. An employee can tell that prosocial values are important for him or her, but perhaps intrinsic and extrinsic work motivators are much more important for that respondent. Just measuring how many respondents judge the prosocial values to be important fails to acknowledge the position of those values within the value system of each respondent. Constructing factors based on the association between various items indicative

of work motivation is a more advanced method but also fails to measure the centrality of the values in the value system as a whole.

Psychologists also argue that investigating the mean level importance of single values might not reveal much as prosocial values are valence issues and not position issues. At the micro-level, the adherence to values is explained by education and socialization, gender and age, although the adherence is assumed to be relatively stable through adulthood. Only in the case of so-called critical junctures—going to school for the first time, entering university, getting a first job, getting married, or buying a house—the adherence to such values might change (Bardi et al., 2009; Rokeach, 1973). At the meso-level, the adherence to values is determined by the context in which someone works, i.e. being exposed to values of the public or private sector and the position one has in the organization (Gutierrez and Van der Walle, 2018). At the macro level, national culture, relative wealth, historical conditions, and administrative traditions are seen as determinative for the adherence to values (Gutierrez and Van der Walle, 2018).

The resulting hypotheses formulated to explain the adherence to specific values as such also apply to the centrality of pro-social values within the value system. The hypotheses then read that at the individual level gender, age, and education are expected to determine the adherence to prosocial values. At the institutional level, the hypotheses read that the sector of employment and managerial position of respondents impacts on the centrality of prosocial values in the individual's value system. At the macro-level, we expect that the wealth and a country's score on the cultural dimension of individualism versus collectivism are explaining variables for the centrality of pro-social values in an individual's value system.

The centrality of prosocial values is measured by calculating the rank order of these values amidst all (available) job motivation indicators, i.e. the idea is to measure the relative importance of each value. This approach ranks the prosocial values within the whole system of work motivators. In this view, a value change entails a change in the whole system of values in the sense that a change in the importance of one value should entail a change in the hierarchy of values (cf. Rokeach, 1973).

Although we will account for the data used, i.e. the ISSP questionnaire in the next section, it is insightful to present the differences between the two approaches already in this section. We use the survey of the International Social Survey Programme (ISSP). The battery of questions on work motivation in the ISSP asks respondents: *"From the following list, please tick one box for each item to show how important you personally think it is in a job"*. This includes two items indicative of a prosocial work motivation:

- How important is a job that allows someone to help other people?
- How important is a job that is useful to society?

Table 1 gives the percentage of respondents in the countries involved that judge prosocial values as important or very important as work motivators.

Table 1. Trends in prosocial values across survey years, countries and sectors

Important: Job that allows someone to help other people								
Country	Absolute importance for people working in the public sector (% judging this (very) important)				Absolute importance for people not working in the public sector (% judging this (very) important)			
	1989	1997	2005	2015	1989	1997	2005	2015
Great Britain	75.62	77.44	77.58	80.58	67.16	71.91	70.11	67.40
New Zealand	--	75.93	81.58	83.49	--	73.52	77.58	81.88
Czech Republic	--	79.00	79.89	78.08	--	68.78	64.03	66.53
Hungary	78.89	80.73	82.91	74.06	76.90	71.31	72.11	58.00
Slovenia	--	92.07	90.31	91.41	--	87.20	85.26	<b>89.97</b>
Germany	74.26	72.96	--	78.08	56.53	61.35	--	65.96
Spain	--	88.13	89.16	92.55	--	83.97	82.71	87.38
France	--	<b>62.67</b>	68.71	70.79	--	60.34	53.51	58.18
Norway	69.75	72.86	73.69	74.95	55.79	62.85	59.60	60.59
Sweden	--	82.53	81.16	82.13	--	64.75	58.81	61.28
Denmark	--	86.67	81.70	83.77	--	76.94	66.45	62.94
Israel	<b>62.66</b>	82.39	86.59	83.68	66.21	81.92	89.16	78.54
Japan	--	74.42	78.18	64.47	--	65.28	66.67	56.26
Poland	--	86.09	--	83.15	--	80.00	--	73.60
Switzerland	--	68.87	87.14	88.85	--	68.85	81.18	79.94
Important: Job that is useful to society								
	Absolute importance for people working in the public sector (% judging this (very) important)				Absolute importance for people not working in the public sector (% judging this (very) important)			
	1989	1997	2005	2015	1989	1997	2005	2015
Great Britain	76.38	77.73	76.45	82.96	67.61	66.46	64.95	66.10
New Zealand	--	70.37	81.14	84.46	--	69.68	72.17	76.10
Czech Republic	--	71.72	79.89	80.82	--	68.23	67.07	66.77
Hungary	89.30	85.85	88.84	83.55	89.09	78.80	78.89	69.09
Slovenia	--	93.59	89.43	89.04	--	85.74	82.52	87.71
Germany	79.21	69.75	--	84.19	63.46	56.62	--	68.16
Spain	--	91.38	90.36	<b>96.28</b>	--	85.29	80.32	89.22
France	--	72.81	77.21	82.86	--	64.00	61.14	64.12
Norway	84.53	76.28	76.06	83.89	65.86	58.99	53.15	58.13
Sweden	--	73.98	73.16	81.42	--	60.11	<b>50.75</b>	55.20
Denmark	--	82.08	74.72	82.12	--	69.42	61.65	60.15
Israel	69.34	84.37 83.73	89.38	81.79	74.18	79.26 73.93	85.77	76.49
Japan	--	83.73	81.82	78.05	--	73.93	73.67	64.50
Poland	--	88.31	--	81.08	--	81.82	--	74.22
Switzerland	--	73.33	88.09	91.08	--	67.19	81.01	82.93

Data source: ISSP module "Work Orientations", waves I-IV.

Table 1 shows that in every country involved, the majority of respondents working in the public sector as well as in the private sector judge prosocial values to be important. This is characteristic of valence issues given the broad amount of consensus among the respondents. Significant differences between employees working in the public and private sector can be seen, especially in the West European countries (Great Britain, Sweden, Norway, Denmark, Germany, France), but even in these countries, the majority of respondents working in the private sector still judge prosocial values to be important. Such an analysis is suggestive in portraying the outcomes as being indicative of the importance of prosocial values among employees and giving an overly optimistic picture of the importance of prosocial values.

Dealing with such valence issues, their centrality in the value system is deemed to be more useful in empirical analysis than the simple adherence to such values as such. The centrality of prosocial values can be measured through calculating the rank order of these values amidst all (available) job motivation indicators (measuring relative importance). The ISSP questionnaires on work motivation contain five additional questions concerning intrinsic and extrinsic job motivators asked in all the rounds of the module. These items were formulated as follows:

- How important is job security?
- How important is high income?
- How important are good opportunities for advancement?
- How important is an interesting job?
- How important is a job that allows someone to work independently?

Given the distinction between seven values, calculating the relative importance of pro-social values provides a range from 1 when a prosocial value is ranked the lowest among all the work motivation values) to 7 - when a prosocial value is ranked the highest among all the work motivation values). A score of 7 is achieved if a respondent only judges the prosocial value to be very important and the other values to be just important or not important. The measurement of rank-based work motivators results in outcomes as given in table 2-a presenting the results for respondents working in the public sector, and 2-b presenting the results for respondents in the private sector.



Table 2. Average ranking of work motivation items

**A. Average ranking of the analysed work motivation items among people working in the public sector**

How important do you think the following are in a job?	Public sector			
	1989	1997	2005	2015
Job security	5.02	4.98	4.94	5.07
An interesting job	4.81	4.98	5.03	4.96
<b>A job that is useful to society</b>	3.68	3.770	3.80	3.99
<b>A job that allows someone to help other people</b>	3.36	3.75	3.88	3.87
A job that allows someone to work independently	3.71	3.90	3.81	3.71
High income	3.63	3.50	3.38	3.18
Good opportunities for advancement	3.66	3.10	3.05	3.14

**B. Average ranking of the analysed work motivation items among people not working in the public sector**

How important do you think the following are in a job?	Non-public sector			
	1989	1997	2005	2015
Job security	5.17	5.10	4.96	5.13
An interesting job	4.72	4.82	4.84	4.73
High income	3.97	3.78	3.90	3.76
A job that allows someone to work independently	3.79	3.88	3.92	3.74
<b>A job that is useful to society</b>	3.43	3.48	3.45	3.61
<b>A job that allows someone to help other people</b>	3.10	3.51	3.52	3.54
Good opportunities for advancement	3.70	3.31	3.30	3.41

*Note: A score of 7 is highest possible, implying that such an item is the most important of all, while a score of 1 implies it is the least important of all seven items. Average rule was used as the method for determining the rank of evaluations of items when they coincided (were 'tied'). In these cases, all the 'tied' values were replaced by their average rank value. Presented are the average scores over all respondents.*

Data source: ISSP module "Work Orientations", waves I-IV.

Tables 2-a and 2-b show that irrespective of the importance attached to prosocial values as such, their rank in the value system is not the highest when compared to the other five work motivators. For employees in the public sector as well as in the private sector, job security and having an interesting job are the two values most central. This puts the outcomes of the previous analysis in perspective. Doing good for society and helping others might be important, but not as important as job security and an interesting job.

The main difference between public sector and private sector employees is that for employees working in the latter sector high income and a job that allows one to work independently are also more central in the value system than the prosocial values, while this is the reverse for people in the public

sector. In the private sector, employees might judge prosocial values to be somewhat important, but intrinsic and extrinsic values are more central in their value system.

Concluding, the rank-based measurement of the centrality of values indicative of work motivation has merits. It puts the importance attached to specific values in perspective, because it is indicative of what matters most to employees, and is in accordance with psychological theory telling that the adherence or non-adherence to prosocial values is not a simple dichotomy, but a matter of degree, i.e. of the centrality (relative importance) of such values within the value-system of an individual<sup>1</sup>. Using very straightforward indicators makes one overly positive about the prominence of prosocial values because a high percentage of the respondents will say 'sure, that is important'. Looking at the relative importance of prosocial values amidst other job motivators, makes one more sceptical about the prominence thereof, as many people will tell you, "well, my job security and my personal interests are, of course, more important than a job that is useful for society or a job that allows me to help others'. At the same time, the differences between employees working in the public and private sector remain, as people working in the private sector consider the two prosocial values to be among the least important job motivators while their centrality in the value system is significantly higher among employees in the public sector.

This article continues by using this rank-based method to investigate whether associations found in previous research still hold when using this alternative measure and what the outcomes are concerning expected relations with other factors, such as the nature of the work, personal characteristics, and national culture.

As told above, in public administration it is expected that prosocial values are more prominently visible among employees in the public sector compared to those in the private sector. Prosocial values are said to be especially important in the public sector as the work done by public employees is distinctive from the work done in the private sector (cf. Perry and Wise, 1990; Ranson and Stewart, 1994). It was also found that personal characteristics such as age and gender are important as older people and women are expected to adhere more intensely to prosocial values than younger people and men (de-Hart et al., 2006; Parola et al., 2019). Concerning age, Erikson (1963) specified that generativity concerns – a desire to serve and guide the next generation and to leave a lasting, positive impact on society – play an increasingly important role in people's lives as they age making prosocial values more important for older people (Parola, 2019, p. 1400). As for gender, it is assumed that men and women are socialized differently, and societies expect prosocial values to be specially adhered to by women (Perry, 2000). This also is the case concerning features of the national culture. When individualism instead of col-

<sup>1</sup> We also run statistical multivariate models with prosocial values operationalized dichotomously for the purpose of showing robustness of our results.

lectivism (I versus We) dominates in a country, one expects prosocial values to become less adhered to in that country (Hofstede, 2001).

Last but not least, one expects the adherence to values to be stable through time. When work motivation is conceived as a psychological trait, it is not expected to be influenced by changes in the context (Bardi et al. 2009; Rokeach 1973). Rokeach and Ball-Rokeach found for the USA impressive stability in American value priorities (Rokeach and Ball-Rokeach 1989, p. 783). They state that this stability in values is “confirming the widely shared view that human values are deep-lying components of collective belief systems and are thus inherently resistant to change” (Rokeach and Rokeach, 1989, p. 777). In public administration, such stability is also assumed by Perry (1997), who argues that prosocial work motivators, in his words ‘Public Service Motivation’, especially correlate with such antecedent factors as parental socialization, religious socialization, professional identification, political ideology and individual demographics (Perry, 1997, p. 183).

In the next sections, these expected, sometimes disputed, associations are tested using the method of rank-based values in work motivation. First, we account for the data used.

### 3 Data and Methods

#### 3.1 Data sources

We use data from the repeatedly conducted International Social Survey Programme (ISSP) module on work orientations (Rounds I to IV: see [www.gesis.org/en/issp/modules/issp-modules-by-topic/work-orientations](http://www.gesis.org/en/issp/modules/issp-modules-by-topic/work-orientations))<sup>2</sup>. ISSP involves a cross-national collaboration of researchers conducting repeated surveys on diverse topics relevant to social sciences (see more at [www.issp.org](http://www.issp.org)). All collected data and documentation are publicly available through the GESIS data archive ([www.gesis.org/en/issp/home](http://www.gesis.org/en/issp/home)). The archive constitutes a rich data set on different topics such as the role of government, citizenship, social inequality, work orientations, environment, national identity, etc., including a variety of demographic characteristics.

We analysed data from 15 OECD countries: Great Britain, New Zealand, Czech Republic, Hungary, Slovenia, Germany, Spain, France, Norway, Sweden, Denmark, Israel, Japan, Poland, and Switzerland. These countries were selected as only they have been included in the ISSP sample both in 1989 (or 1997)

<sup>2</sup> This survey does not employ panel design which would allow us to directly measure value change (or stability) and their determinants on the individual level. Only panel survey design could be tailored to investigate the same individuals and their values for a prolonged period of time. Therefore, we test our hypotheses on the aggregate level and are not in a position to postulate claims about the potential causal explanations of value change on the individual level. We only attempt to reveal how levels of support for prosocial values in work motivation change (or remain stable) on country or some other level of aggregation. Still, changes (if any) of the indicators' values on the aggregate level do indicate the extent of changes on the individual level allowing the measurement of the potential occurrence of such changes and what direction they take.

and 2015 and have variables allowing to distinguish employees working in the public and private sectors<sup>3</sup>.

In the ISSP, the question about work motivation as mentioned in the previous section was asked already in 1989. Since then, the survey included this topic on three further occasions (in 1997, 2005 and 2015). Accordingly, we have data on job motivation for four years covering a 16-year period. The number of countries incorporated in the survey (and producing relevant data for our study) steadily increased from five countries in 1989 (Great Britain, Hungary, Israel, Germany, and Norway) to 14 countries in 2005 and 15 in the 2015 surveys. Within each wave and (relevant four our study) country, the number of respondents varied between 901 and 2518, with a total number of respondents in all the analysed countries and waves of 65,126

### **3.2 Measuring the dependent variable**

As told already in the previous section, the measurement of the dependent variable 'adherence to prosocial values in work motivation' is based on an index of two items included in the ISSP module on work orientation based on the survey question: *"From the following list, please tick one box for each item to show how important you personally think it is in a job"*. This includes two items indicative of a prosocial work motivation:

- How important is a job that allows someone to help other people?
- How important is a job that is useful to society?

The questions are asked using a 5-point Likert scale, ranging from 1 (an item not being important at all) to 5 (an item being very important). The items used to capture prosocial values have often been used in scholarly research. An overview of the numerous studies using this item is given by Wright (2008, p. 82). Importantly, some researchers find the two questions to be adequate indicators of Public Service Motivation. This can be seen, for instance, in the argument given by Kjeldsen and Andersen saying that 'Together, the two questions capture the two aspects mentioned in Hondelghem and Perry's (2009, p. 6) definition.' (Kjeldsen and Andersen, 2013, p. 161).

Using Likert scales, the measurement of the centrality of indicators for work motivation results in ties. There are several ways to deal with such ties. One can award such ties with the maximum score, the average score, or the minimum score. The descriptive statistics for the differently operationalized rankings are given in Table 3, showing how the measurement impacts on the significance of differences between the work motivation of employees working in the private and those working in the public sector.

<sup>3</sup> Germany's data for the ISSP wave in 2005 was excluded from the sample since it lacked a variable distinguishing public and non-public sector employees.

Table 3. Descriptive statistics of different operationalisations of prosocial values indexes

<b>A. Prosocial values indexes resulting in continuous variables</b>							
	<b>N</b>	<b>Mean</b>	<b>St. dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>Skewness</b>	<b>Kurtosis</b>
Simple average score of prosocial values items (range of values: 0 – 4)	63496	2.90	0.78	0	4	-0.62	0.54
Average of deviations of prosocial values items from mean of total 7 items (range of values: -3 – 3)	63496	-0.15	0.55	-3.00	2.57	-0.44	1.15
Average position of prosocial values items based on ranking amidst 7 items (ties: minimum rule; range of values: 1 – 7)	62691	2.16	1.18	1	6.5	0.92	0.16
<b>Average position of prosocial values items based on ranking amidst 7 items (ties: average rule; range of values: 1 – 7)</b>	<b>62691</b>	<b>3.58</b>	<b>1.20</b>	<b>1</b>	<b>6.5</b>	<b>0.05</b>	<b>-0.71</b>
Average position of prosocial values items based on ranking amidst 7 items (ties: maximum rule; range of values: 1 – 7)	62691	5.01	1.66	1	7.0	-0.36	-1.02
<b>B. Prosocial values indexes resulting in dichotomous variables</b>							
	<b>N</b>	<b>Yes (% of cases)</b>		<b>No (% of cases)</b>			
Any of the deviations of prosocial values items from mean of total 7 items $\geq 1$	64196	5.2		94.8			
Any of the deviations of prosocial values items from mean of total 7 items $\geq 0.5$	64196	19.7		80.3			
Any of ranked prosocial values items (ties: average rule) in Top 1 amongst 7 items	64196	1.1		98.9			
Any of ranked prosocial values items (ties: average rule) in Top 2 amongst 7 items	64196	12.0		88.0			
Any of ranked prosocial values items (ties: average rule) in Top 3 amongst 7 items	64196	31.2		68.8			
Any of ranked prosocial values items (ties: average rule) in Top 4 amongst 7 items	64196	59.7		40.3			

Notes:

St. dev. – standard deviation.

Min. – minimum value in the data.

*Max.* – maximum value in the data.

*Ties: minimum rule* – method for determining the rank of evaluations of items when they coincide (are 'tied'): minimum rule replaces all the 'tied' values by their minimum rank value.

*Ties: average rule* – method for determining the rank of evaluations of items when they coincide (are 'tied'): average rule replaces all the 'tied' values by their average rank value.

*Ties: maximum rule* – method for determining the rank of evaluations of items when they coincide (are 'tied'): maximum rule replaces all the 'tied' values by their maximum rank value.

Data source: ISSP module "Work Orientations", waves I-IV.

Part A of Table 1 shows that the rank-based method with 'ties' getting the average values (ties: average rule) results in a distribution of prosocial value index that most resembles a normally distributed variable. The measurement of the centrality of prosocial values in this way minimizes the skewness (as well as keeps kurtosis negative and at the same time still relatively low) producing a variable with an almost normal distribution. Therefore, in our main analysis of the predictors of prosocial values, we employ this index as our dependent variable.

Another criterion demands a statistically significant positive correlation between indicators of a latent construct. In this case, the inter-item correlations for the two indicators of prosocial values were always between 0.63 and 0.65 in the four waves.<sup>4</sup> This satisfies the condition of internal consistency for indicators of a latent construct.

Given these findings, we prefer using the dependent variable that is measured by calculating the average position of the two items measuring the adherence to prosocial values based on their ranking amidst the seven available job motivators (with the 'average rule' for resolving tied rankings).

### **3.3 Measuring the explanatory variables**

As to the independent variables, the most important for our analysis is the distinction between working in the public and private sectors. In the surveys the respondents answer the question in which sector they work. People working in the public sector are expected to adhere to prosocial values to a higher degree than people working in the private sector (Perry, 1990; Pederson, 2013). Furthermore, trends over the years in the work motivation of public sector employees can only be properly understood if they are compared to some 'base level', that is, the centrality of prosocial values in the work motivation of people working in the private sector. The derived variable distinguishes not only the sector in which the respondent works (public vs. private), but also his/her occupation. Only those working in professional, specialist technical,

<sup>4</sup> The respective Cronbach's alphas were 0.775, 0.773, 0.790 and 0.790. Additionally, exploratory factor analysis of all the 7 motivation items (not reported here) showed that the two items that we use as prosocial values indicators loaded highest on the same factor and all the other 5 loaded highest on two other factors.

managerial, administrative, clerical, and/or service professions were considered for inclusion into the group of public sector employees.

As mentioned in the previous section, it is also necessary to include additional explanatory variables at the individual level to account for their possible influence on the distribution of values of the dependent variable:

- **Gender: male vs. female.** This variable controls for possibly higher adherence to prosocial values in work motivation among women. DeHart-Davis, Marlowe, and Pandey (2006), for instance, contend that compassion is a feminine dimension of public service motivation.
- **Age: recoded into four categories:  $\leq 25$ , 26–45, 46–65,  $\geq 66$ .** This variable controls for possibly higher adherence to prosocial values in work motivation among older people. In this regard, Parola et al. (2019) found that age and gender are indeed antecedents of PSM (as well as prosocial values), although these effects differ across cultural contexts.
- **Supervisory status (managerial position).** We used the question asking whether the respondent is responsible for the supervision of other employees. This variable controls for a possibly higher adherence to prosocial values in work motivation among the people employed in the public sector and having a managerial position. For example, Karl & Sutton (1998) found significant differences between supervisors and non-supervisors in the public as well as the private sector concerning the values central to their work motivation.
- **Education:** the number of years in education, distinguishing two groups  $\leq 12$  years vs.  $\geq 13$  years. This variable controls for possibly higher adherence to prosocial values in work motivation among higher educated people. Wilson & Musick (1998), for instance, argue that adherence to prosocial behaviour depends on the availability of resources, including cultural and educational.

At the macro-level, we include two variables. First, we use one of the cultural dimensions as distinguished by Hofstede (2001). This refers to the degree of individualism versus collectivism in a country. As it is said on the Hofstede's website.

The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among its members. It has to do with whether people's self-image is defined in terms of "I" or "We". In Individualist societies people are supposed to look after themselves and their direct family only. In collectivist societies, people belong to 'in groups' that take care of them in exchange for loyalty.

[A country] with a very high score is an Individualist society. This means there is a high preference for a loosely-knit social framework in which individuals are expected to take care of themselves and their immediate families only (see [www.hofstede-insights.com/product/compare-countries](http://www.hofstede-insights.com/product/compare-countries)).

Second, the indicator for the economic development of a country is measured through the GDP per capita of the countries involved (see <https://stats.oecd.org>).

## 4 Results

We conducted regression analyses employing different operationalisations of prosocial values in work motivation (and including hierarchically nested elements of year and country (see the formula in *the notes of* Table 4) to control for possible cross-country and cross-year differences of variances) to corroborate our findings with regard to the difference related to the sector of employment. The results presented in table 4 show that regardless of the specific method of operationalizing the measurement of the prosocial values, the distinction between the importance of these value for employees in the public and private sector is significant.

**Table 4. Differences of adhering to prosocial values among people working in the public vs. private sector using different operationalization of prosocial values**

		Effect of working in public vs. private sector		
Indicators of prosocial values resulting in continuous variables	N	Fixed effect	Standard error	t-value
Simple average score of prosocial values items	52202	0.25***	0.03	30.51
Average of deviations of prosocial values items from mean of total 7 items	52202	0.16***	0.06	27.80
Average position of prosocial values items based on ranking amidst 7 items (ties: minimum rule)	51695	0.26***	0.01	21.39
Average position of prosocial values items based on ranking amidst 7 items (ties: average rule)	51695	0.35***	0.01	28.12
Average position of prosocial values items based on ranking amidst 7 items (ties: maximum rule)	51695	0.44***	0.02	25.65
Indicators of prosocial values resulting in dichotomous variables	N	Fixed effect	Standard error	z-value
Any of the deviations of prosocial values items from mean of total 7 items $\geq 1$	52672	0.25***	0.04	5.50
Any of the deviations of prosocial values items from mean of total 7 items $\geq 0.5$	52675	0.38***	0.03	14.78
Any of ranked prosocial values items (ties: average rule) in Top 1 amongst 7 items	52672	0.30**	0.09	3.21
Any of ranked prosocial values items (ties: average rule) in Top 2 amongst 7 items	52672	0.38***	0.03	12.44
Any of ranked prosocial values items (ties: average rule) in Top 3 amongst 7 items	52675	0.44***	0.02	19.78
Any of ranked prosocial values items (ties: average rule) in Top 4 amongst 7 items	52675	0.38***	0.02	17.50



*Notes:*

*Ties: minimum rule – method for determining the rank of evaluations of items when they coincide (are 'tied'): minimum rule replaces all the 'tied' values by their minimum rank value.*

*Ties: average rule – method for determining the rank of evaluations of items when they coincide (are 'tied'): average rule replaces all the 'tied' values by their average rank value.*

*Ties: maximum rule – method for determining the rank of evaluations of items when they coincide (are 'tied'): maximum rule replaces all the 'tied' values by their maximum rank value.*

*Data source: ISSP module "Work Orientations", waves I-IV.*

*Formula of the generalized linear mixed models:*

*Importance of prosocial values ~ Sector + (1 | Year) + (1 | Year: Country)*

*\*\* The effect of working in the public sector versus working in the private sector on the importance of prosocial values is statistically significant at 0.01.*

*\*\*\* The effect of working in the public sector versus working in the private sector on the importance of prosocial values is statistically significant at 0.001.*

*Effects of survey year and countries nested within years are insignificant regardless of indicator of prosocial values importance.*

Two results seen in table 4 are noteworthy. The first one is that taking the rank-based method makes the difference between employees working in the public and private sector much more prominent. Whereas the mean-based indicator shows an effect of 0.25 on the sector one works in, this increases to 0.35 using the rank-based method. Hence, our indicator does a better job in distinguishing the values central in the work motivation of employees in the two sectors.

Second, table 4 shows that there does not appear any signs of a decline in the centrality of prosocial values amidst all job motivators of the years. Their centrality within the whole system of job motivators is stable if not slightly improving (especially, in the public sector).

The preliminary conclusion cannot but be that claims about the prominence of adherence to prosocial values among public sector employees strongly depend on the operationalization of the indicators. Whether adherence to prosocial values is measured as a simple importance of separate job motivators or measured as their relative importance amidst all available job motivators, makes all the difference in one's claims about the prominence of prosocial values in work motivation for employees in the public and private sector and the trends therein.

#### **4.1 The analysis explaining the varying adherence to prosocial values**

The correlation between the centrality of prosocial work motivation in the value system and the sector one is employed in, might be an illusory relation that disappears when controlled for other explaining factors. This section investigates whether that is the case. In order to look for possible explanations for varying adherence to prosocial values, we conducted nested three-level hierarchical linear regression analyses with individuals nested in countries and

countries nested in years of the survey. Such hierarchical regression is necessary to reveal not only possible cross-country differences but also to determine if any trends of the centrality of prosocial values in work motivation exist, and whether individual characteristics (age, gender, having a supervisory position) and contextual features (the GDP per capita in the country, and the extent to which individualism or collectivism dominates in the country). To avoid bias, the estimation of the relation between the adherence to prosocial values and the sector employed in is controlled for factors (both on the individual and country/year level) deemed important for explaining the adherence of prosocial values in work motivation as discussed in the relevant literature.

We ran four increasingly complex hierarchical linear regression models wherein the dependent variable was the index of the centrality of prosocial values in the work motivation of respondents<sup>5</sup>:

- The first model (the “null model”) does not contain any explanatory variables, only the hierarchical nested structure, which is important for revealing existing (if any) country and year differences related to adherence to prosocial values in work motivation.
- The second model, in addition to the hierarchical nested structure, includes two explanatory individual-level variables: sector of employment and managerial position of respondents.
- The third model adds sociodemographic control variables on the individual level, in addition to variables in the second model, gender, age, and education.
- The fourth model adds the two macro-level variables: GDP per capita in a country and a country’s score on the cultural dimension of individualism versus collectivism.

All the models were run employing function *lmer()* available in R package *lme4* ver. 1.1-20 (Bates et al., 2015). The outcomes of the analysis are presented in Table 5.

<sup>5</sup> Let us remind here that we employed the index that is based on averages of rank-ordered items measuring adherence to prosocial values (“How important is: ... a job that allows someone to help other people? ... a job that is useful to society?”) among all seven job motivators (and using average rule for resolving ‘ties’ of ranking, see Tables 4 and 5 for more detailed information).

Table 5. Results of linear multilevel models for rank-based dependent variable measuring prosocial values in work motivation with countries nested within years

	M1: Only countries and years	M2: M1 + Sector * Supervisory status	M3: M2 + Socio-demographic variables	M4: M3+ macro-level variables
<b>Fixed effects</b>				
(Intercept)	3.60***	3.55***	3.38***	3.82***
<b>Sector</b> (reference: Non-public sector)				
Public sector	--	0.37***	0.31***	0.31***
<b>Supervisory status</b> (reference: Does not supervise)				
Supervises	--	-0.13***	-0.09***	-0.09***
Public sector and supervises	--	0.03 (n.s.)	0.03 (n.s.)	0.03 (n.s.)
<b>Gender</b> (reference: Male)				
Female	--	--	0.24***	0.24***
<b>Age</b> (reference: ≤ 25)				
26–45	--	--	-0.02 (n.s.)	-0.03 (n.s.)
46–65	--	--	0.12***	0.12***
≥ 66	--	--	0.20***	0.20***
<b>Education</b> (reference: ≤ 12 years)				
≥ 13 years	--	--	0.005 (n.s.)	-0.005 (n.s.)
<b>Macro-level variables.</b>				
GDP per capita (centred and scaled)				0.01 (n.s.)
Individualism				-0.007**
<b>Random effects</b>	<b>Variance (%)</b>	<b>Variance (%)</b>	<b>Variance (%)</b>	<b>Variance (%)</b>
Year	0.002 (0.15)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Year * Country	0.066 (4.51)	0.069 (4.86)	0.069 (4.90)	0.060 (4.32)

	<b>M1: Only countries and years</b>	<b>M2: M1 + Sector * Supervisory status</b>	<b>M3: M2 + Socio-demographic variables</b>	<b>M4: M3+ macro-level variables</b>
Residual	1.384 (95.34)	1.354 (95.14)	1.333 (95.10)	1.333 (95.68)
<b>Model characteristics</b>				
<b>AIC</b>	198481.8	134139.2	127183.5	127195.1
<b>BIC</b>	198518.0	134199.9	127286.9	127315.7
<b>Log-likelihood</b>	-99236.9 (df=4)	-67062.6 (df=7)	-63579.76 (df=12)	-63583.55 (df=14)
<b>REML criterion</b>	158207.2	134125.2	127159.5	127167.1
<b>N</b>	<b>49772</b>	<b>42640</b>	<b>40617</b>	<b>40617</b>

Notes:

*Dependent variable - average position of prosocial values items based on ranking amidst 7 work motivation items. Average rule was used as the method for determining the rank of evaluations of items when they coincided (were 'tied'). In these cases, all the 'tied' values were replaced by their average rank value.*

*AIC – Akaike information criterion.*

*BIC – Bayesian or Schwarz information criterion.*

*n.s. – not significant statistically.*

*\*\* – statistically significant at 0.05 level.*

*\*\*\* – statistically significant at 0.01 level.*

Data source: ISSP module “Work Orientations”, waves I-IV.

The strongest explaining factor is as expected the sector someone works in— i.e. public or private. For respondents working in the public sector the adherence to prosocial values within their value system takes a more central position than for respondents working in the private sector. The next important explanatory factor is gender. Women attach significantly more importance to prosocial values in job motivation. The same goes for the age of respondents. In the ranking amongst all job motivators, prosocial values are more central among older employees. Having a supervisory position slightly diminishes the relative importance of such values among the other job motivators. Adding all these variables does not diminish the direct relation between sector employed in and the centrality of prosocial work motivators. This is in conformity to the theory on prosocial values.

Adding macro-level explanatory variables does make a difference with regard to the cultural dimension of individualism versus collectivism. In countries where individualism dominates the prosocial values of work motivation are more peripheral in the value-systems of individuals and in countries where collectivism dominates prosocial values are more central in the value-systems of individuals.

In none of the models, a cross-year variance of the dependent variable is significant. Moreover, it is very close to zero and statistically insignificant. This implies that the centrality of prosocial values on the aggregate level in the public sector is rather stable over the years. This is in conformity with psychological theories on the stability of values.

## **5 Discussion**

This article asked if there are merits in measuring the importance of prosocial values in work motivation in terms of their position in the value system as a whole, compared to current measures of work motivation, and what does this kind of measurement imply for the role of such values in causal analyses.

Psychological research on values and motivation points out that the way one measures the values individuals endorse, makes all the difference. One can ask whether or not somebody thinks it is important that a job allows someone to help other people or that the job is useful to society. Many people will say 'Sure, that is important ... Hurray'. That was also found in this study. More than half of all respondents in all years of study in all countries involved, irrespective of where they work, said so. Moreover, in some countries at specific periods of time even more than 90 % of people declared adherence to prosocial values. However, psychological theory (Bardi et al., 2009; Rokeach, 1973), also suggests, that this may not be the best way to measure the adherence to specific values. Instead, one needs to measure the centrality of values amidst other values (relative importance). In this case, one needs to assess how important the job motivators indicative of the adherence to prosocial values are compared with other job motivators such as having job security, a high income, opportunities for advancement, an interesting job, and a job that allows someone to work independently.

One of the implications is that measuring the adherence to prosocial values in this way, makes one become more sceptical about the prominence thereof. Job security and an interesting job are by far the most important job motivators in all countries and in both the public and private sector. Ranking of these two prosocial job motivators is time and country invariant. However, the rank of the two prosocial job motivators amidst all job motivators is consistently higher in the public sector than in the private sector. For private-sector employees the two indicators end up almost last in the ranking of job motivators. The difference between employees in the public and private sector is much more pronounced when using the rank-based measure than using the mean-based measure. Hence, the way one measures the centrality of prosocial work motivators determines how they understand the spread thereof, especially among public officials.

Starting with Perry and Wise (1990), the public administration literature has long emphasized the distinctive character of motives related to working in the public sector, emphasizing a general altruistic motivation among public sector employees to serve to the interests of the community, showing proso-

cial behaviour and declaring that public sector employees exhibit stronger inclinations than private sector employees towards altruistic behaviour. The empirical results presented in this study suggest that prosocial values are indeed more adhered to among public servants than among non-public sector employees, higher among women than among men, higher among older than among younger employees, and higher in countries where collectivism instead of individualism dominates.

This does imply that prosocial values are not the dominant work motivators in the public sector. Among the public sector employees as among private sector employees, job security and having an interesting job are judged to be the most important job motivators. And they remain to be central among our studied job motivators during the last couple of decades.

The theoretical implication of this research is that it does not seem to make much sense to see human beings as either prosocial or not. They are mostly social beings, adhering to prosocial values but simultaneously attach value to more selfish motivators. The important question is which of these values is central in the total value system of individuals, how to explain the relative importance of certain values for certain individuals living in specific countries and at specific periods of time. Psychological research suggests that the composition of value systems is stable and this research corroborates this assumption.

The last implication is that this research goes contrary to research suggesting that the public sector has a kind of monopoly over prosocial values. Adherence to prosocial values in work motivation is more prominent among employees in the public sector than among employees in the private sector, but there are also similarities as the most central values among employees in both sectors are job security and interesting work.

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