

Public Service Motivation of local government employees in the Netherlands and Belgium:

The effect of national value-systems on PSM

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Abstract

This article attempts to unfold the origins of international differences in public service motivation (PSM) by focusing on the effect of macro-level institutions on PSM. To explain the country differences levels of PSM and normative institutions measured as value-systems were studied in the Netherlands and Belgium. Analysis showed that although Dutch respondents were more likely to have post-materialistic values and post-materialists scored higher on PSM, values as they were measured in this study could not explain the country differences. It appears that value-systems do not form part of the effect of macro-level institutions. Nonetheless, value-systems did have an independent effect on PSM, giving support for an institutional approach to PSM.

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Introduction

Public service motivation (PSM) has grown to become one of the most popular fields of study for public administration. This is not surprising since studies have shown that fostering PSM can contribute significantly to the performance of public organizations in several ways (Perry & Hondeghem 2008, Brewer & Selden 2000, Crewson 2007, Naff & Crum 1999, Vandenabeele 2008b, Houston 2008, Kim 2005, Ritz 2009). These studies used PSM as a predictor of outcomes such as satisfaction and turnover, whereas the origins of PSM remained unclear for a long time. A recent stream of research however focuses on discovering the origins of PSM (Perry 1997, Perry & Vandenabeele 2008, Moynihan & Pandey 2007). Perry (1997) found several antecedents such as gender, age and religion to effect the development of PSM. According to Perry and Vandenabeele (2008) institutions form the most important antecedent of PSM, in which institutions consist of *'cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior'* (Scott 1995, p. 33). This institutional focus follows from the notion that PSM is rooted in a *'logic of appropriateness'* in which the individual acts according to codes, beliefs and paradigms (March & Olsen 1989) instead of acting out of self-interest. Institutions structure opportunities and constraints for certain behavior (John 1998) and are present at multiple levels; from micro (family), meso (religion, red tape) to macro level (state structures, national identity). Together they form a system which influences the individual's behavior (Scott & Christensen 1995). Institutions such as state structure (regulatory institution), value-systems (normative institution) and national identity (cognitive institution) play an important role on the macro level. This study takes on a normative perspective on institutions, assuming that *'behavior is not primarily determined by self-interest, but by an awareness of one's role in a situation'*, and by *'internalized standards of conduct'* (Scott & Christensen 1995, xv). From a normative perspective on institutions, values and collective norms are strong influences on the behavior of individuals.

Although institutions as an explanation for differences in public service motivation have been studied on several levels, such as the effect of family and religion, the influence of macro-level institutions has not been studied this far. Interestingly, international studies did find differences in PSM between countries after controlling for other variables (Vandenabeele & Van de Walle 2008, Norris 2003, Vandenabeele et al, 2009), which could point towards a significant influence of macro-level institutions on PSM. Vandenabeele et al (2009) suggested that these differences could be caused by differences in state structures or value-systems, but none of these ideas were tested empirically. Moreover, their study was plagued by severe shortcomings making their data less reliable. Therefore the question remains; what is the influence of macro-level institutions on public service motivation and can macro-level institutions explain national differences in PSM?

To explore the influence of macro-level institutions this study measured levels of public service motivation in Belgium (Flanders) and the Netherlands, and one macro-level institution. Because a normative perspective was chosen, value-systems were studied. To isolate the effect it is necessary to control for other macro-level institutions, such as state structure. Since the national level in Belgium (federal) and the Netherlands (unitary) differ in structure and tasks (Pollitt & Bouckaert 2004), the local level of government was taken as study object. Local government in Belgium and the Netherlands are similar in structure -both run by a mayor and aldermen- and tasks -main tasks are education, public health, social services- (Committee of the Regions 2001) making comparison more valid. Although previous studies have focused on international differences (Vandenabeele & Van de Walle 2008, Vandenabeele et al 2009) none have

empirically tested assumptions about the origins of such differences. Therefore this study explores the effect of macro-level normative institutions, measured as value-systems present in both countries using Inglehart's (1997) theory on changing value-systems in countries; from materialistic values such as economical security to more post-materialistic values such as self-expression. A shift towards post-materialistic values supports the development of democratic institutions which in turn fosters public service motivation. According to Vandenaabeele et al (2009), the level of materialistic and post-materialistic values in a society can affect the level of public service motivation.

This paper contributes to the discussion on the influence of macro-level institutions on PSM by firstly comparing levels of PSM found in two countries and secondly exploring the notion that value-systems contribute to the development of public service motivation. First, this paper will give an overview of the literature on public service motivation and institutions, leading to the expectations. These are presented in hypotheses. Next follows a short description of the cases and the method of data collection. Thirdly the data analysis will be given proper attention. Finally, the results are presented and discussed, leading to concluding remarks on the origins of PSM.

Theoretical framework

This section will present the relevant concepts in this study. Not only is public service motivation defined and discussed, macro-level institutions and in particular value-systems, are also discussed. This discussion will lead to hypotheses on differences between countries and the effect of value-systems on PSM.

Defining public service motivation

The assumption that there are individuals who desire to serve the public interest lies at the heart of public service motivation theory (Perry & Wise 1990, Perry & Hondeghem 2008). Perry & Wise (1990) defined public service motivation as *'an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations'* (p.368). They argued that an individual's motivation is multidimensional; an individual is motivated by rational, norm-based and affective motives. However, different studies use different concepts ('public service ethos', 'l'éthique du bien commun') to describe the same or parts of the same phenomenon, and use different definitions, often focusing on a particular part of PSM (self-sacrifice, compassion) (Vandenaabeele 2007). To overcome these different definitions and conceptualizations Vandenaabeele (2007) integrated various views and concepts into one umbrella definition: *'the belief, values and attitudes that go beyond self-interest and organizational interest, that concern the interest of a larger political entity and that motivate individuals to act accordingly whenever appropriate'* (p.574). This definition combines different views on PSM, making it a more comprehensive definition than others and an appropriate definition for this study.

To measure PSM Perry (1996) developed four dimensions covering public service motivation, based upon the rational, norm-based and affective motives. These are attraction to policy making, commitment to the public interest, compassion, and self-sacrifice. However, there is no consensus on whether this measurement scale is universally applicable (Wright 2008), also given that Vandenaabeele (2008b) found that Perry's model was not suited to the Flemish context. Therefore Kim and Vandenaabeele (*forthcoming*) attempted to develop a PSM measurement that is more suitable for international comparisons, with resulting dimensions: 'attraction to public participation', 'commitment to

public interest', 'commitment to public values', 'compassion' and 'self-sacrifice'. These dimensions were adopted in this study. Studying a range of dimensions will give greater insight into the concept (Brewer et al. 2000).

Public Service Motivation Theory and Institutionalism

Expanding theory on PSM, Perry and Vandenabeele (2008) developed a theory of public service motivation that incorporates several motivational theories, focusing on the importance of institutions in shaping PSM. According to March & Olsen (1989), the behavior of an individual is either shaped by a logic of appropriateness, referring to '*beliefs, paradigms, codes, cultures and knowledge*' (1989, p.22), or by a logic of consequentiality, which is based upon calculating the consequences of actions and thus on rational self-interest. Vandenabeele (2007) fitted PSM behavior within the logic of appropriateness, because it is not aimed at fulfilling self-interests but at realizing the values imbedded in institutions. Through socialization processes an individual absorbs values from the institutions surrounding him. Individuals identify with certain values imbedded in institutional settings, enabling the development of PSM. According to Perry and Vandenabeele (2008) most antecedents which have been found to influence PSM can be seen as institutional, such as family, religion (Perry 2007), volunteering (Perry et al 2008) and organizational factors such as red tape (Moynihan & Pandey 2007). Hence, exploring institutional theory is important when studying PSM.

Institutions are present at multiple levels; from micro-level family life to state structures and value-systems on a macro-level (Scott 1995). Each of these institutions has an effect on the individual and together they form an institutional system (Scott & Christensen 1995). Institutions can be seen from different perspectives; regulatory, normative, or cognitive, although the last two show some conceptual overlap. When taking on a normative perspective, as is done in this study, one assumes that '*behavior is not primarily determined by self-interest, but by an awareness of one's role in a situation*', focusing on values and collective norms present within a certain country.

However, each country has its own macro-level institutional system (state structure, identity and culture) to which individuals are exposed. Vandenabeele et al (2009) decided to test whether differences in PSM levels existed between countries. The study found substantial differences, suggesting macro-level institutions influence PSM. Although this study gave more insight in PSM worldwide, it was plagued by severe shortcomings. Firstly, the measurement was done on the national level, which made comparing the datasets difficult because of major differences in state structures and tasks of national governments, culture and values across nations (Pollitt & Bouckaert 2004). Moreover, due to difficulties in combining the dataset PSM was measured using only four items; a rather narrow measurement of PSM. Therefore, the question remains whether differences exist between countries or whether found differences were due to chance. More importantly, there is currently no explanation for these differences. One possible explanation could be that differences in values between countries could be affecting PSM. The next section discusses this line of thought further.

Public Service Motivation and value-systems

Vandenabeele et al. (2009) found significant differences in levels of PSM between countries. These differences could be due to the effect of macro-level institutions, such as state structures (unitary or federal), national culture or value-systems. This study explores one of these ideas. Taking on a normative perspective, this study focuses on value-systems as institution (Scott 2001).

Using data from the World Values Survey, Inglehart (1995) developed a theory on value-systems worldwide. He argues that there are three major trajectories of societal change; socio-economic development towards more innovation and individual resources, value changes from materialistic to post-materialistic values, and the democratization of political institutions (Welzel et al, 2003). These developments usually occur together; when nations move towards post-materialistic values they shift from an emphasis on economic growth and security towards values such as quality of life and personal well-being, resulting in more emphasis on individual autonomy and emancipation. With more individual resources and less concern for survival, an emancipative orientation takes over, leading to increased pressure to democratize. Since democratic institutions foster high levels of public service motivation (Inglehart & Welzel 2005), Vandenabeele et al. (2009) expect higher levels of PSM in more post-materialistic countries. Inglehart (1997) analyzed 43 countries and found that the Netherlands is one of the most post-materialistic societies of all studied countries. From 1981 to 1990 support for post-materialistic values in the Netherlands increased with 28% (-2% to 26%). The increase in Belgium was 18%, from -16% to 2%, which is still a very low percentage of support for post-materialistic values. Based on Inglehart's theory Vandenabeele et al (2009) expected a higher score on the PSM dimensions interest in public participation and commitment to the public interest in post-materialistic countries. Self-sacrifice and compassion are more related to traditional values, which leads to the expectation that materialists will score higher on these dimensions. Until now, these ideas were not tested empirically; they are tested in this study.

Hypotheses

Following from the theoretical framework presented above, this study firstly expects differences in levels of PSM between Belgium and the Netherlands. Secondly, this study expects that value-systems can explain variances in average levels of PSM. Lastly, this study expects that the variance in levels of PSM between countries can be explained by the variance in value-systems. Therefore, based upon the discussion on PSM and value-systems this study's expectations can be stated as following:

- H1: Levels of PSM among local public servants will differ between Belgium and the Netherlands.
- H2: Levels of post-materialistic values will be higher in the Netherlands than Belgium.
- H3: Levels of PSM among local public servants are affected by differences in materialistic and post-materialistic values.
 - o H3a: Materialistic values will have a positive effect on PSM dimensions compassion and self-sacrifice.
 - o H3b: Post-materialistic values will have a positive effect on PSM dimensions participation, public interest and values.
- H4: The effect of country of origin on levels of PSM among local public servants can be explained by the effect of values on PSM.

Methods

To test the hypotheses above quantitative data was collected from two countries. This data was then combined in one dataset and analyzed using analysis of covariance and hierarchical regression. These procedures will be explained after the method of data collection is discussed.

Data collection

The data on which this paper is based was collected in the Netherlands and Belgium (Flanders). Both datasets were collected using web-surveys. In total six municipalities participated, three in each country. The local level of government was chosen to exclude the effect of state structures; the local government in both countries is rather similar in structure and tasks. Firstly, the governments exist of a mayor and an indirectly chosen council of aldermen. Secondly, the tasks are comparable; social order, education, social services and health are the most important tasks in both countries. Thirdly, in both countries funds from regional and national government form the largest part of their income; in Belgium 85%, in the Netherlands 84% (Committee of the Regions, 2001). Selecting similar samples reduces the chance that results are due to comparison errors or differences in other variables. Only 'town hall' public servants were involved in the study; excluding firemen and other non-town hall officials.

Table 1: Response rates e-mail survey

Netherlands	Municipality	N	% of total workforce
	1	90	45
	2	115	38,3
	3	114	27,8
Total		319	
Belgium	Municipality		
	1	120	22,6
	2	79	75
	3	16	53
Total		215	
Total		534	

The data was collected in spring of 2010 by sending out a web-based e-mail survey to all employees within city hall, asking if they wanted to participate in a survey on motivation and values among government employees. Almost all employees had a personal computer; those who did not were invited to participate on a central computer. As in all social research the data could be biased by respondents giving socially desirable answers. By providing full anonymity this bias was minimized. Response rates on web-based survey are generally lower than on mail-surveys (Vandenabeele 2008a), but by using incentives (such as reminders and personalizing the survey) much was done to get a higher response (Vandenabeele 2008a). This resulted in response rates from 20% to 75%. The response rates can be found in table 1. In total 524 respondents participated. The average respondent in both datasets was 44 years old at the time of the survey and in service for 16 years in the Netherlands and 17 years in Belgium. In Belgium 93 men and 121 women participated, in the Netherlands 166 men and 149 women participated. In the Netherlands 12.5% of the respondents held a supervisory position, in Belgium 32.8%.

To ensure an accurate and valid comparison both surveys contained exactly the same questions on PSM and the answers were measured on the same scale. Moreover, all other questions were formulated similarly except for the question on education since education systems in both countries differ. This was later corrected by using a unified scale.

Variables

The study variables were measured on different scales, hence they are presented shortly here. Public service motivation was measured on five dimensions, being 'attraction to public participation' (in short: 'participation'), 'commitment to public interest' ('interest'), 'commitment to public values' ('values'), 'compassion' and 'self-sacrifice'. These dimensions and their items were developed by an international network of public administration scholars (Kim & Vandenberg, *forthcoming*). The PSM items were measured on a five point scale, measuring to what degree one agreed with the statements.

Value-systems were measured using two paired questions from Inglehart's (1997) own survey (World Values Survey). Values form an institutional system on the national level. However, that system is not 'out there', but present '*within the mind*' of the individual (Scott & Christensen 1995). Therefore measuring values on the individual level can result in information on national value-systems. The survey asked: 'There is a lot of talk these days about what this country's goals should be in the next ten or fifteen years. Would you please say which one of them you yourself consider most important in the long-run?' Respondents chose from four options; two representing materialistic values and two post-materialistic values. The second question asked the same, only now they had to choose a second goal. Respondents who supported materialistic values in both questions were assigned to the group 'materialists'. Those supporting two post-materialistic values were assigned to the group 'post-materialists'. Those who supported one materialistic and one post-materialistic value were assigned to the group 'mixed', resulting in a dichotomous measurement with three groups.

Some control variables were also included in the analysis; gender (with male as reference), education, age, tenure and supervisory position (with not being a supervisor as reference group). The full survey can be found in appendix 1.

Data analysis

Confirmatory factor analysis with LISREL offered support for a model of 18 items for PSM. Since the χ^2 -statistic inflates when used in samples over 200, other fit indices that are less sensitive to sample size and model complexity were used to estimate model fit (Vandenberg 2008a). These indices show that the model had a good fit; Goodness of Fit Index =0.97, Comparative Fit Index =0.97, Standardized Root Mean Residual =0.06, Root Mean Square of Approximation =0.05, Normed Fit Index =0.95.

To be able to compare PSM in Belgium and the Netherlands one needs to compare the means of each sample. This would ask for an analysis of variance because multiple samples were compared (Gravetter & Wallnau 2007). However, one should correct for possible covariates since this study is not a true experiment. Thus, an analysis of covariance (ANCOVA) should be performed (Gravetter & Wallnau 2007). ANCOVA is able to assess effects of the grouping or independent variable (as for the control variables) on the dependent variable without the necessity of experimental conditions.

The second hypothesis on differences in value-systems between Belgium and the Netherlands is tested using Pearson's Chi Square. This technique is used because values were not tested on a scale; only the association between value-system and country could be tested.

Regression is used to test the effect of values on PSM. Regression is useful when one wants to predict an outcome variable from a predictor variable (Field 2005). Moreover, because the next step is to test whether the effect of values can explain the variance between countries, a model was built using regression. The first model consists of two control variables, gender and tenure, in the second country was added, in the third two dummies; one for materialistic and one for post-materialistic values (the mixed-group being the reference group). If the effect of country becomes smaller or disappears when adding values this will support the hypothesis. This could indicate a mediating effect but if found it will require further research before a mediation effect can be confirmed.

Results

In table 2 the univariate and bivariate statistics are provided. From this table we can see that country is correlated with four of five PSM dimensions and values is highly related to one of the dimensions. Moreover, some of the control variables are correlated with PSM whereas others are not. This adds to the conflicting findings on the relationship between socio-demographic factors and PSM (Pandey & Stazyk 2008, Leisink & Steijn 2009). Gender, age and tenure are mostly correlated with PSM. Education and supervisory position only show a small correlation with parts of PSM. Therefore they were not considered for further analysis. Moreover, age and tenure were highly correlated ($r=.73$, $p<.01$), so only tenure was included in further analyses. The matrix shows our hypotheses are worth testing; there are significant correlations between country, values and PSM.

Table 2: Univariate and bivariate statistics

	N	Mean	Std Dev	Minimum	Maximum	1	2	3	4	5	6	7	8	9	10	11	12
1 Gender	529	.51	.50	0	1	1											
2 Education	529	3.80	.77	2	6	-.09 *	1										
3 Age	503	44.53	9.98	18	65	-.20 **	-.23 **	1									
4 Tenure	523	16.74	11.38	0	45	-.24 **	-.23 **	.73 **	1								
5 Supervisory position	506	.79	.40	0	1	.21 **	-.07	-.14 **	-.17 **	1							
6 Values	526	2.54	.77	1	3	-.10 *	.03	.10 *	.03	.06	1						
7 Country	534	.40	.49	0	1	.09 *	-.07	.02	.04	-.25 **	-.06	1					
8 PSM politics	534	4.20	.47	1	5	.07	.01	.05	.06	-.08	-.00	.08 *	1				
9 PSM public	534	3.60	.61	1	5	-.21 **	.05	.15 **	.15 **	-.12 **	.02	.08 **	.29 **	1			
10 PSM values	534	4.07	.45	1	5	.03	-.11 *	.17 **	.15 **	-.05	.01	.23 **	.52 **	.29 **	1		
11 PSM compassion	533	3.46	.51	1	5	.13 **	-.05	.02	.12 **	.00	-.12 **	.17 **	.39 **	.28 **	.44 **	1	
12 PSM sacrifice	533	2.81	.69	1	5	-.15 **	.10 *	.12 **	.13 **	-.01	.07	-.06	.22 **	.38 **	.26 **	.38 **	1

(* $p < .1$, ** $p < .05$, *** $p < .01$)

Differences in levels of PSM between the Netherlands and Belgium

To test the first hypothesis concerning average levels of PSM in Belgium and the Netherlands an analysis of covariance (ANCOVA) was done, controlling for gender and tenure. In table 3 the results are provided.

The results show that if we look at the separate dimensions, average levels of PSM differ significantly, with Belgium scoring higher, between the countries on the dimensions participation, interest, values and compassion. The unique explained variance by country is respectively 0.6%, 1.2%, 5.3% and 2.4%. On the dimension self-sacrifice no significant difference was found.

Table 3: ANCOVA per dimension

Participation	SS	F		Partial η^2
Gender	.690	3.165	*	.006
Tenure	.611	2.803	*	.005
Country	.624	2.865	*	.006
Error	112.012			
Adjusted total	113.890			
R ²	.016			
Adjusted R ²	.011			
F-value model	2.865	*		
N	518			
Interest	SS	F		Partial η^2
Gender	7.045	20.266	***	.038
Tenure	1.795	5.165	**	.010
Country	2.111	6.072	**	.012
Error	178.686			
Adjusted total	191.502			
R ²	.067			
Adjusted R ²	.061			
F-value model	6.072	**		
N	518			
Values	SS	F		Partial η^2
Gender	.172	.926		.002
Tenure	2.206	11.888	***	.023
Country	5.294	28.527	***	.053
Error	95.392			
Adjusted total	103.461			
R ²	.078			
Adjusted R ²	.073			
F-value model	28.527	***		
N	518			
Compassion	SS	F		Partial η^2
Gender	3.011	12.009	***	.023
Tenure	3.112	12.412	***	.024
Country	3.177	12.672	***	.024

Error	128.606			
Adjusted total	137.713			
R ²	.066			
Adjusted R ²	.061			
F-value model	12.672	***		
N	517			
Self-sacrifice	SS	F	Partial η^2	
Gender	3.430	7.323 ***	.014	
Tenure	2.673	5.708 **	.011	
Country	.526	1.123	.002	
Error	240.277			
Adjusted total	249.065			
R ²	.035			
Adjusted R ²	.030			
F-value model	1.123			
N	517			

*** p<.01, ** p<.05, *p<.1

Values in the Netherlands and Belgium

If we turn to the second hypothesis on values in the Netherlands and Belgium, the expectation was that the level of post-materialistic values would be higher in the Netherlands. Most respondents chose one materialistic and one post-materialistic value; 71.4% of the Dutch respondents and 70.3% of the Belgian respondents. The proportion of this 'mixed' group could have an important influence on the results. If we look at the 'outspoken' respondents, more Belgian respondents (21.8%) supported materialistic values than Dutch (13.5%). For the post-materialistic values a different image forms: more Dutch respondents supported post-materialistic values than Belgian respondents; respectively 15.1% and 7.9%. This supports Inglehart's findings that the Netherlands is more post-materialistic than Belgium. To test whether these differences are statistically significant a Pearson's Chi Square test was done. The association between country and values is significant $\chi^2 (1) = 10.693, p=.005$, meaning that in this sample Dutch respondents were more likely to support post-materialistic values than Belgian respondents.

The effect of values

Although we have established an association between country and values, the true question is whether these values effect public service motivation. Moreover -if values indeed have an effect on PSM- the question is whether values can explain the variance between countries. To test these questions a regression model was built testing the effect of values and whether values can explain the differences between the countries. In table 4 the regression models are presented.

If we first look at the effect of values on PSM, the results show that values are significantly related to PSM on several dimensions. Comparing the respondents with materialistic values to the mixed values group, we see that materialistic values have a significant effect on the dimensions compassion and self-sacrifice. The relationship on the dimension compassion is positive; the materialistic values group scores higher than the mixed group, which is in line

with this study's expectation. On the dimension self-sacrifice the materialistic group scores lower on PSM than the mixed group. If we look at post-materialistic values compared to the mixed-values group, these values significantly influence the scores on the dimension participation, values, compassion and self-sacrifice. These results indicate that value-systems have a significant effect on public service motivation. Looking at the *F*-ratios we can conclude that the models including values explain the scores on PSM on the dimensions participation, values, compassion and self-sacrifice significantly better.

Turning towards the third hypothesis, we need to assess whether values can explain the variance between countries. Firstly, we can see that country is significantly related to the scores on the dimension participation, interest, values and compassion. For the value-systems to explain these variances, the beta-values of country have to diminish when adding values to the model. This did not happen; the effect of country is actually strengthened on the dimensions participation (beta =.08 to .10) and values (beta =.22 to .25), and stays the same on the dimension interest (beta=.11) and compassion (beta=.14). This indicates that value-systems do not explain the variance between countries.

The analysis also shows that gender has a significant effect on the dimensions interest and compassion with men scoring higher than women, and on the dimension values, with women scoring higher than men. Tenure significantly affects PSM on the dimensions interest, values, compassion and self-sacrifice. The length of employment seems to have a positive effect on the public service motivation of an employee on all dimensions except participation.

Table 4: Regression per dimension

Participation	Model A		Model B		Model C	
	β (B)	SE	β (B)	SE	β (B)	SE
Constant	-- (4.11)	.05	-- (4.08)	.05	-- (4.08)	.05
Gender (female =1)	.09 (.08)*	.04	.08 (.07)*	.04	.07 (.06)	.04
Tenure	.08 (.00)*	.00	.07 (.00)	.00	.05 (.00)	.00
Country (Belgium =1)			.08 (.08)*	.04	.10 (.09)**	.04
Materialistic vs mixed					-.05 (-.06)	.06
Post-mat. vs mixed					.12 (.18)***	.07
F model	2.652*		2.838**		3.654***	
F-ratio	2.652*		3.189*		4.813***	
<i>R</i> ²	.010		.017		.035	
Adj. <i>R</i> ²	.006		.011		.025	
Interest	Model A		Model B		Model C	
	β (B)	SE	β (B)	SE	β (B)	SE
Constant	-- (3.63)	.06	-- (3.59)	.06	-- (3.60)	.06
Gender (female=1)	-.19 (-.23)***	.05	-.20 (-.24)***	.05	-.20 (-.24)***	.05
Tenure	.09 (.01)**	.00	.08 (.00)*	.00	.08 (.00)*	.00
Country (Belgium =1)			.11 (.14)**	.05	.11 (.14)**	.05
Materialistic vs mixed					-.01 (-.01)	.07
Post-mat. vs mixed					.00 (.00)	.08
F model	13.740***		11.424***		6.834***	
F-ratio	13.740***		6.495**		.023	

R^2	.051		.063		.063	
Adj. R^2	.048		.058		.054	
Values	Model A		Model B		Model C	
	β (B)	SE	β (B)	SE	β (B)	SE
Constant	-- (3.93)	.04	-- (3.87)	.05	-- (3.86)	.05
Gender (female=1)	.07 (.07)	.04	.05 (.04)	.04	.03 (.03)	.04
Tenure	.17 (.01)***	.00	.15 (.01)***	.00	.13 (.01)***	.00
Country (Belgium =1)			.22 (.20)***	.04	.25 (.22)***	.04
Materialistic vs mixed					-.06 (-.07)	.05
Post-mat. vs mixed					.14 (.19)***	.06
F model	7.206***		14.011***		11.263***	
F-ratio	7.206***		26.885***		6.672***	
R^2	.028		.077		.100	
Adj. R^2	.024		.071		.091	
Compassion	Model A		Model B		Model C	
	β (B)	SE	β (B)	SE	β (B)	SE
Constant	-- (3.24)	.05	-- (3.20)	.05	-- (3.17)	.05
Gender (female=1)	.18 (.18)***	.05	.14 (.15)***	.05	.14 (.15)***	.05
Tenure	.16 (.01)***	.00	.14 (.01)***	.00	.14 (.01)***	.00
Country (Belgium =1)			.16 (.16)***	.05	.16 (.17)***	.05
Materialistic vs mixed					.08 (.11)*	.06
Post-mat. vs mixed					.10 (.16)**	.07
F model	11.105***		11.827***		8.757***	
F-ratio	11.105***		12.757***		3.346**	
R^2	.042		.066		.080	
Adj. R^2	.038		.060		.071	
Self-sacrifice	Model A		Model B		Model C	
	β (B)	SE	β (B)	SE	β (B)	SE
Constant	-- (2.78)	.07	-- (2.81)	.07	-- (2.82)	.07
Gender (female=1)	-.12 (-.17)***	.06	-.12 (-.16)***	.06	-.13 (-.17)***	.06
Tenure	.11 (.01)**	.00	.11 (.01)**	.00	.10 (.01)**	.00
Country (Belgium =1)			-.05 (-.07)	.06	-.03 (-.05)	.06
Materialistic vs mixed					-.08 (-.15)*	.08
Post-mat. vs mixed					.09 (.19)**	.10
F model	8.864***		6.392***		5.659***	
F-ratio	8.864***		1.433		4.430**	
R^2	.034		.037		.053	
Adj. R^2	.030		.031		.044	

* $p < .1$, ** $p < .05$, *** $p < .01$

Discussion

The results of this study provide interesting insights for public service motivation research. In this discussion the hypotheses are discussed first. Secondly, a more in depth discussion of possible origins of variance in PSM between countries is presented. Lastly, some suggestions for further research are offered.

PSM differences and the effect of value-systems

A number of things can be learned from the analyses. Firstly, in this study country of residence accounted for up to 5% of the variance in individual public service motivation levels. Significant differences were found on all dimensions except self-sacrifice. Because PSM is a complex concept and the compared cases (Dutch and Flemish local governments) were very similar and covariates were taken into account, the results confirm that the country of residence is relevant when studying public service motivation (Vandenabeele et al, 2009). This gives sufficient support to accept hypothesis 1, Belgium scores significantly higher on all dimensions except self-sacrifice.

Secondly, using Inglehart's (1997) theory on value-systems, this study expected that average levels of post-materialism would be higher in the Netherlands. Indeed a significant association was found between values and country; Dutch respondents were more likely to have post-materialistic values than Belgian respondents. Therefore, hypothesis 2 is accepted.

Moreover, value-systems have a significant effect on public service motivation. Models including values as variable could explain up to 10% of the variance in PSM scores. These results indicate that values have a significant effect on PSM and thus hypothesis 3 is accepted. The rather low explained variance reflects the fact that many other factors, such as organizational factors, would need to be included to give a full explanation of PSM (Perry & Hondeghem 2008, Vandenabeele et al 2009). When looking in detail, findings on the effect of materialistic values compared to the mixed values group were unclear; having a significant positive effect on compassion (expected) and a negative effect on self-sacrifice (not expected). Moreover, post-materialists scored higher than the mixed group on the dimensions politics and values (as expected), but also on the dimensions compassion and self-sacrifice, where this was not expected. A possible explanation for the different direction of the effects is the dichotomous measurement of values, which resulted in a very large mixed-values group. Another explanation could be that although self-sacrifice is a 'traditional' dimension, materialistic individuals are more focused on their own safety and well-being before someone else's and post-materialists are able to sacrifice themselves for others, since their own situation is rather safe (Inglehart 1997).

The final hypothesis concerned the question whether values could explain the differences in PSM between countries. For this hypothesis this study first looked at whether there was a significant association between country and value-system, which there was. A second step was to test whether the effect of country diminished when adding values. This was not the case. The effect of country is independent of the effect of values, although both affect scores on PSM significantly in this study. Thus, hypothesis four needs to be rejected.

Origins of variance in PSM between countries

Finally, it is worth looking at the mean scores of both countries, seeing as it appears something interesting happened: although Dutch respondents were more likely to choose post-materialistic values and post-materialists scored higher than the mixed-values group on most PSM dimensions, Dutch respondents scored *lower* on average on all dimensions

of PSM except self-sacrifice. These findings necessitate further theorization on the origins of the variance between countries.

A first explanation could be that the size of the 'mixed-values' group in the measurement clouded the results. The measurement of values should be sharpened if we want to get a clearer image of the effect of value-systems on PSM. Inglehart's (1997) own research could provide more insight in the measurement of value-systems. Moreover, because values did have an effect on PSM in this study, it would be interesting if further research could investigate the effect of values further and in more countries. Since Belgium and the Netherlands are rather similar, it could be interesting to investigate whether results differ when studying two very different countries, one scoring higher on materialism and one scoring high on post-materialism.

A second possible explanation is that although value-systems affect PSM, it is not normative institutions which explain the variance between countries. Regulatory institutions, such as state structures as described by Pollitt & Bouckaert (2004), or cognitive institutions such as identity could play a larger role in PSM. According to Hofstede (1980) each nation has its own identity; scoring differently on several dimensions, such as power distance- egalitarianism, individualism-collectivism, masculinity-femininity and security-insecurity. The first two dimensions could be an explanation for the found differences between Belgium and the Netherlands; as said by Hofstede, the Netherlands scores higher on individualism and lower on power distance than Belgium. Individualism has been related to lower scores on PSM because the society then places higher emphasis on the self than the common good, which could lead to a decrease in public service motivation (Vandenabeele et al, 2009).

Implications for further research

Although this study has tried to find an explanation for variance in levels of PSM between countries, the puzzle remains unsolved. Further research is necessary to understand the impact of macro-level institutions on public service motivation. Proper measurement of normative institutions such as value-systems is necessary; preferably measuring values on a scale instead of dichotomous, as was done in this study. A second suggestion is taking in other macro-level institutions, for instance based upon Pollitt & Bouckaert's (2004) description of country-differences or by combining PSM data with Hofstede's (1980) dimensional classification of countries.

Nevertheless, this study shows that value-systems are effecting public service motivation; individuals supporting post-materialistic values scored significantly higher on several dimensions of PSM. Further research should study this further, exploring the effect of values by taking into account value-systems and by considering institutional theory when studying PSM. Moreover, this study shows the importance of studying all dimensions of PSM; it might even be so that each dimension has its own set of antecedents and origins. Interestingly, self-sacrifice was the only dimension not affected by country. Perhaps self-sacrifice is the most 'international' dimension, attractive to all regardless of origins, whereas others are more nationally and culturally determined. These ideas need to be tested in future studies.

Finally, both gender and tenure significantly affected PSM, but not as expected. Men scored higher on compassion, whereas this dimension has been called a 'feminine' dimension (Pandey & Stazyk 2008, Leisink & Steijn 2009). Moreover, tenure was consistently positively associated with PSM, which goes against previous findings (Moynihan & Pandey 2007, Pandey & Stazyk 2008). This adds to the conflicting findings on the relationship of socio-demographic antecedents with PSM and necessitates more research on socio-demographic antecedents.

Conclusion

This paper addressed the question of how variances in public service motivation between countries could be explained by studying the impact of value-systems on PSM. With regard to the first part of the research question, concerning the differences between countries, evidence was found that macro (country)-level institutions are influencing the development of PSM. The results of this study show that levels of public service motivation differ between two rather similar countries, Belgium and the Netherlands, even when controlling for possible covariates. Respondents from Belgium scored significantly higher than Dutch respondents.

The second part of the research question concerned the effect of macro-level normative institutions, measured as value-systems, on PSM and whether value-systems could explain the variance between countries. The results indicate that in this study values were significantly associated with country. Dutch respondents were more likely to support post-materialistic values than Belgian respondents which support findings by Inglehart (1997) that the Netherlands is a more post-materialistic country. Moreover, values, especially when comparing post-materialistic values with the mixed-values group, had a significant (positive) impact on public service motivation in this study. However, these value differences could not explain the differences in PSM between Belgium and the Netherlands, since firstly Belgian respondents scored higher than Dutch respondents on PSM, which is against the expectation that post-materialists score higher, and secondly the effect of country was only strengthened when adding values. If values could explain the variance, the effect of country should have diminished. Still, this does provide support for the effect of value-systems and thus further support for an institutional approach to PSM as suggested by Perry and Vandenabeele (2008) in view of the fact that macro-level normative institutions, measured as value-systems, had a significant effect on PSM in this study. Moreover, gender and tenure had a significant effect on several of the PSM dimensions, although not always in the expected direction; men scored higher on compassion and tenure consistently effected PSM positively.

Despite these interesting findings, the results should be carefully interpreted. The greatest concern lies with the measurement of value-systems. Because only a small part of the respondents could be seen as materialistic or post-materialistic and all others formed a 'mixed' group, results from analysis using such small groups should be read with caution. The measurement of values could have suppressed or enlarged effects. A challenge for further international comparative research is to develop a more reliable and comprehensive measurement of value-systems, preferably on a scale. Moreover, results could be biased due to respondents giving socially desirable answers, although this bias was reduced by assuring anonymity to all respondents and results show that respondents were not afraid to score low on the PSM questions (several answered 1 on a scale from 1 to 5). Thirdly, due to the small dataset in both countries, one should be cautious to generalize these findings to all local governments in Belgium and the Netherlands. Finally, because the two countries compared in this study were very similar, effects could be suppressed; research among two more different countries could lead to larger effects of both country and values.

However, this study provides convincing evidence that macro-level institutions influence public service motivation, given significant differences were found while every possible measure was taken to make the comparison between Belgium and the Netherlands reliable. Moreover, it provides support for including values in future research on the antecedents of public service motivation. Value-systems and country significantly influenced levels of public service motivation in this study. Nevertheless, the question of what causes the differences in PSM between countries remains unanswered, necessitating further research on antecedents of public service motivation, preferably among countries

which are more different when looking at their value-system and by including other macro-level institutions, regulatory or cognitive.

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Appendix 1: Survey questions

PSM dimension participation	<ol style="list-style-type: none"> 1. I am satisfied when I see people benefiting from the public programs I was involved in. 2. It is important to contribute to the fight against social problems. 3. I am interested in helping to improve public service.
PSM dimension interest	<ol style="list-style-type: none"> 1. Serving the public interest is more important than helping a single individual. 2. It is important for me to contribute to the common good. 3. I would prefer seeing public officials do what is best for the whole community, even if it harmed my interests.
PSM dimension values	<ol style="list-style-type: none"> 1. I personally identify with the aim of protecting individual liberties and rights. 2. I think equal opportunities for citizens are very important. 3. Everybody is entitled to a good service, even if it costs a lot of money. 4. It is fundamental that the interests of future generations are taken into account when developing public policies. 5. It is important that citizens can rely on stable provision of public services.
PSM dimension compassion	<ol style="list-style-type: none"> 1. It is difficult for me to contain my feelings when I see people in distress. 2. Considering the welfare of others is one of the most important values. 3. I feel sympathetic to the plight of the underprivileged. 4. I get very upset when I see other people being treated unfairly.
PSM dimension self-sacrifice	<ol style="list-style-type: none"> 1. Making a difference in society means more to me than personal achievements. 2. I am willing to risk personal loss to help society. 3. I believe in putting civic duty before self. 4. I am prepared to make sacrifices for the good of society.
Value-system	<p>There is a lot of talk these days about what this country's goals should be in the next ten or fifteen years. Would you please say which one of them you yourself consider most important in the long-run?</p> <ol style="list-style-type: none"> a) Maintaining the order of nation; b) Giving the people more say in important government decisions c) Fighting rising prices; or d) Protecting freedom of speech. (Inglehart 1997)

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