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Senior Public Managers' Organizational Commitment: Do Private Sector Experience and Tenure Make a Difference?

Rhys Andrews, Jesper Rosenberg Hansen and Katy Huxley

ABSTRACT Drawing on the literature on sector imprinting, we examine whether private sector experience is related to organizational commitment among senior public managers. We also explore the role that position and organizational tenure play in shaping that commitment, since tenure length is often associated with greater commitment, and assumed to be an important mediator of employee and organizational outcomes. Multi-level analyses of data from a large multi-national survey of senior managers from the central governments of sixteen European countries indicate that a greater proportion of private relative to public sector work experience is associated with weaker organizational commitment among senior public managers. In addition, position and organizational tenure are both positively related to commitment. Mediation analysis suggests that the mechanism through which the negative effect of private sector experience on senior managers' organizational commitment operates is individuals' shorter tenure in the same organization. All of these results hold when we analyze the affective, continuance and normative dimensions of commitment separately.

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INTRODUCTION

Governments across the world have sought to encourage managers from the private sector to bring their expertise into the public sector (Light 1999; Ketelaar et al. 2007; Pollitt and Bouckaert 2011). At the same time, public managers' role expectations have changed and become more akin to those associated with running private firms (Osborne and Gaebler 1994). Evidence of growing interconnection, and employee and managerial mobility between the sectors (e.g. Frederiksen and Hansen 2017) therefore draws attention to the impact of private sector experience on the values and attitudes of public managers, especially their commitment to the organizations in which they work. Organizational commitment has long been shown to be strongly related to workers' job satisfaction, and to have a negative association with employee turnover and, especially, turnover intention (Meyer et al. 2002). Moreover, numerous studies have indicated that commitment may have a positive influence on job performance (e.g. Riketta 2002; Fu and Deshpande 2014). Critically, it could be argued that senior managers' organizational commitment is particularly important, as organizational leaders play a central role in shaping employees' values and attitudes, including their commitment to the organization as well (Strauss et al. 2009).

There are now a plethora of studies examining organizational commitment in the public sector (see Oliveira and Rowe 2018, for a summary). Like research into private firms, this scholarship indicates that organizational commitment among public employees has a positive influence on job satisfaction and self-reported performance (e.g. Park and Rainey 2007; Kim 2005), and a negative one with turnover intention (Balfour and Weschler 1996). The positive effects of organizational commitment may be especially important for public managers, particularly those at the apex of public organizations. Not only are such individuals responsible for motivating and managing staff in ways that enhance their commitment (Moldogaziev and Silvia

Senior Managers' Organizational Commitment

2015), but senior public managers' attitudes towards their organization are also likely to have major societal implications as they are tasked with implementing policies intended to improve citizens' quality of life (Bryer 2007; Page and Wright 1999).

Given the potentially far-reaching impact of senior public managers' organizational commitment, it is essential to examine the connection between private sector experience and that commitment, especially the mechanisms of socialization that might mediate the effects of private experience on commitment. Sector imprinting theories suggest that time spent in the private sector leaves an indelible mark on the attitudes of those individuals who switch to work in the public or nonprofit sector (Boardman et al. 2010). Although New Public Management (NPM) reforms have arguably reduced the differences between public and private management (Boyne 2002; Meyer and Hammerschmid 2006a; 2006b), research suggests sectoral divergence in values, such as Public Service Motivation (PSM) in particular, persists (e.g. Bullock et al. 2015). Nevertheless, the literature on sector imprinting also indicates that its effects can be superseded as individuals become socialized into a new working environment (Boardman et al. 2010). This may be especially important in contemporary public organizations as sector switching has increased in the wake of NPM reforms (Frederiksen and Hansen 2017). Drawing on theories of sector imprinting, we therefore aim to cast new light on organizational commitment in the public sector by investigating the role that private sector experience and position tenure and organizational tenure play in shaping the commitment of top managers in central governments across Europe.

Sector differences in organizational commitment *per se* have been identified in the past (for an overview of these studies see Hansen and Kjeldsen, forthcoming or Baarspul and Wilderom 2011). Importantly, previous research finds that socialization into the public sector has a bigger influence on the values of managers than socialization into the private sector (Becker and Connor

Senior Managers' Organizational Commitment

2005), and that this effect may be especially strong for people in the public sector with private experience (Meyer and Hammerschmid 2006a). Given the social significance of the work undertaken by senior public managers, it is of vital importance to understand whether socialization may influence their organizational commitment. Analysis of whether private sector experience influences the organizational commitment of public sector managers or whether imprinting is displaced through socialization processes is now needed to take research in this area forward.

Organizational commitment encompasses affective commitment relating to the attachment an employee feels toward an organization, continuance commitment understood as the extent to which they need the employment provided by the organization, and normative commitment encapsulated in their sense of obligation towards that organization (Allen and Meyer 1990). These different dimensions of commitment are not mutually exclusive, and are likely to be susceptible to similar individual and organizational forces (Meyer and Allen 1997; Swailes 2002). For senior public managers, previous employment in the private sector seems likely to influence the degree to which they want, need and ought to be committed to the public organization in which they work. Likewise, socialization into the public sector work environment may be the mechanism that mediates the effects of private sector imprinting on all three dimensions of public managers' commitment, especially through the length of time that managers spend in the same public sector job or organization.

The empirical literature on organizational commitment suggests that length of tenure is a particularly critical determinant (Mathieu and Zajac 1990). According to personnel psychology theories, the longer an individual remains in the same job or organization, the more they have invested in making that position or source of employment a success (Cohen 1993). Whether by having greater "sunk costs" within their existing circumstances or gradually reducing their "side

Senior Managers' Organizational Commitment

bet” on alternatives, employees with longer service display higher levels of organizational commitment (Meyer and Allen 1984). In addition to generating strong direct effects on commitment, tenure may also mediate the effects of other background variables, as an individual is inexorably socialized into commitment to their position and organization as time passes.

Does private sector experience influence senior public manager's organizational commitment? Is position or organizational tenure a more important determinant of commitment? Does length of tenure in the public sector mediate the effects of private sector work experience? To answer these questions, we draw upon a large-scale multinational survey consisting of more than 3,500 senior public managers from 16 European countries within multiple different service areas of the public sector. This is an interesting sample to investigate senior public managers' attitudes, especially as it has traditionally been difficult to generate large samples with which to study issues relating to publicness (Rainey 2011). Moreover, the survey consists of a wide range of variables – several of which are key to understanding commitment in public organizations – such as job autonomy (Stazyk et al. 2011). This allows for the development of a more rigorous analysis of the antecedents of organizational commitment in the public sector than has been attempted in the past (Hansen and Kjeldsen, forthcoming).

The paper begins by theorizing the connection between private sector experience and the organizational commitment of senior public managers, before considering the relationship between position and organizational tenure on the one hand, and commitment on the other. Thereafter, the data and methods used for our analysis are described and the results of our statistical modelling presented. We conclude the paper by reflecting on the theoretical and practical implications of our findings.

THEORY

Private Sector Experience and Organizational Commitment

Previous work experience may be an important influence on whether people feel committed to the organization in which they work (Meyer et al. 1993). In the public administration literature, empirical studies have shown that the backgrounds of managers (including private sector experience) shape both their attitudes (Boardman et al. 2010), their perceptions (Chen 2012; Feeney 2008), their behaviors (Villadsen 2012; Krøtel and Villadsen 2016), and their career outcomes (Bozeman and Ponomariov 2009). Nevertheless, Petrovsky et al. (2015) argue that we need to understand better the connection between managerial background and performance-related outcomes. In particular, they suggest that we need to know more about the dynamics of person-environment fit as it relates to a manager's previous sectoral experience and the public sector role that they now occupy – what they term “publicness fit” (Petrovsky et al. 2015). Following the argument that private sector experience may harm publicness fit, we seek to establish how that experience is related to organizational commitment.

Private sector work experience may be increasingly important as evidence suggests that people, including managers, are sector switching more than in the past (Frederiksen and Hansen 2017). In particular, prior research indicates that public managers with private sector experience have lower job satisfaction just after they enter the public sector (Boardman et al. 2010). As job satisfaction and commitment are linked, we expect that former private experience will also influence organizational commitment among senior public managers. Such experience may indicate that managers have less interest in serving the public and thereby less affective and normative commitment to the organizations that facilitate public service. Moreover, as private employees shift jobs more (Frederiksen and Hansen 2017), we also anticipate that having

Senior Managers' Organizational Commitment

experience in the private sector indicates a greater likelihood of job shifting, which could be expected to weaken continuance commitment. This could occur even though managers with private experience entering the public sector may do so because they have specific competencies and expertise, which leads to faster promotion and more positive work attitudes (Boardman et al. 2010).

Sector imprinting arguments suggest that people coming from the private sector -- and especially if they have a considerable amount of private experience relative to their public sector experience -- have different values and attitudes than those from the public sector (Boardman et al. 2010). So, even though former business executives may choose to move to the public sector, the impact of their time in the private sector may continue to influence their level of organizational commitment – especially if they have more private than public sector work experience. From a person-environment fit perspective, we expect that people with a higher proportion of private experience relative to public experience would be more likely to have a lower fit with the working environment in public organizations (Leisink and Steijn 2008) – which could lead to lower organizational commitment. Nonetheless, as Petrovsky et al. (2015) highlight, their movement into the public sector implies that public managers with private sector experience likely have higher publicness fit than those staying in the private sector.

Arguments concerning the proportion of private experience lowering organizational commitment seem likely to apply across all three dimensions of commitment – affective, normative and continuance commitment (Allen and Meyer 1990). Public managers with a high proportion of private sector experience may have lower affective commitment because sector imprinting has left them with a weaker sense of “publicness” or PSM than those with comparatively less experience outside the public sector. They, therefore, do not bear the burden of

Senior Managers' Organizational Commitment

organizational problems in the same way as public sector stalwarts, even though their PSM may be higher than those private managers staying in the private sector. Due to the impact of the relative time they have spent in the private sector, managers with a higher proportion of private experience may have lower continuance commitment to public sector organizations, especially as they may have a wider pool of potential job opportunities elsewhere. Since a greater proportion of their career has been spent outside the public sector, managers with a higher ratio of private to public sector experience may also have lower normative commitment in their present organization. Based on the above, we therefore propose the following:

Hypothesis 1: The higher the proportion of work experience in the private sector, the lower the organizational commitment of senior public managers

Tenure and Organizational Commitment in Public Organizations

There is a huge literature on the relationship between tenure and organizational commitment (e.g. Cohen 1993; Wright and Bonnett 2002). By tenure, we here simply mean the years of experience in a specific position or organization, rather than a tenure system i.e. whether or not someone has a permanent position. Tenure has often been shown to be an important positive antecedent of organizational commitment, though there is some debate about the dynamics of that correlation, as a small number of studies identify a non-linear relationship (Beck and Wilson 2000).¹ From a person-organization fit perspective, longer tenure mainly increases organizational commitment because those who are less suited to the organization would likely have left their position or organization, leaving behind them a more committed workforce (Mitchell et al. 2001).

Meta-analysis research indicates that both position and organizational tenure are positively related to organizational commitment (Meyer et al. 2002). Nevertheless, we expect that

Senior Managers' Organizational Commitment

organizational tenure will have a stronger influence on organizational commitment than position tenure. Based on a meta-analysis of empirical studies, Mathieu and Zajac (1990) suggest that organizational tenure is a stronger predictor of commitment than position tenure, for instance, because of the greater sunk costs that are associated with time spent in an organization in whatever position (e.g. pension plan contributions). Organizational tenure is specifically related to the organizational focus of commitment. Moreover, organizational tenure by definition is at least as long as, and very often longer than, an individual's position tenure. During their time in an organization, managers may hold a variety of positions within that organization, especially in central government, where progression within the same organization may be a feature of the employment trajectory of career bureaucrats (Pollitt and Bouckaert 2011).

For all of the above reasons, we expect that the positive relationship between tenure and commitment will be strong for senior public managers. Senior managers play a critical role in organizational decision making, shaping organization structures, strategies, norms, and values. This increased participation and influence could be expected to have a positive impact on organizational commitment, and is likely to be important for both position and organizational tenure. That being said, the sparse evidence on the effects of position and organizational tenure to date is equivocal. In a study of UK police forces, both rank and tenure are positively related to organizational commitment (Dick 2011). By contrast, in a large US sample of federal employees, Moldogaziev and Silvia (2015) find that neither supervisor nor job tenure substantially influences organizational commitment. However, it is conceivable that both organizational and position tenure may be especially important for senior public managers' commitment, particularly in Europe.

Senior Managers' Organizational Commitment

First, public sector managers working in European central government are more likely to be “pure” bureaucrats guaranteed life-long employment and, therefore, permanent tenure in the public sector (Olsen 2006). Second, it is also probable that there is higher job security in central government in Europe, which could also be expected to influence the tenure of managers. Third, central government organizations are often large professional bureaucracies, and the size and specialization of these agencies could influence -- and potentially increase -- tenure, as there are by definition fewer of these big organizations with which to find new employment (e.g., Boyne 2002; Rainey 2011 argue public organizations generally are larger than private). Fourth, senior civil servants are sometimes argued to have exceptional PSM (Bright 2005), which also could lead them to stay longer in the same position or organization to conduct work in the public interest. Finally, the tenure-organizational commitment relationship could be especially important in central government agencies where organizational performance is more difficult to measure than in street-level or first-response public services.

We expect tenure to influence all three commitment dimensions (affective, continuance and normative commitment) – though the mechanisms are different. Based on prior theory and evidence, tenure's influence on affective and normative commitment is mostly because senior managers want to stay because they are happy and feel attached to the organization (the affective dimension) or need to stay for a longer time due to loyalty and a commitment to the organization's goals (the normative dimension). Continuance commitment is more a question that it is better to remain with the organization because of the investment made in the organization and position. Since former studies have also shown that tenure is related to all three dimensions (Meyer et al. 2002), we propose the following two hypotheses:

Senior Managers' Organizational Commitment

Hypothesis 2a: The longer the position tenure, the higher the organizational commitment of senior public managers

Hypothesis 2b: The longer the organizational tenure, the higher the organizational commitment of senior public managers

In addition to having a direct relationship with organizational commitment, tenure may be the mechanism through which other factors indirectly affect managers' commitment to the organizations in which they work. Tenure length captures many of the effects associated with socialization into a new working environment, such as a better understanding of an organization's traditions, goals, and values (Fisher 1986). Indeed, scholars have argued that organizational socialization "may be a critical mediator of many HR practices and organizational behaviour outcomes" (Chao et al. 1994, 742). This may be especially true for the connection between private sector experience and the commitment of senior public managers. The impact of sector imprinting on organizational commitment is likely to be a product of the experiences managers have of working in a specific position and organization in the public sector. Longer position and organization tenure indicates the likelihood that a manager with a higher proportion of private sector experience will have become familiar with distinctive public sector norms, raising the prospect of high person-environment and publicness fit whatever the proportion of private experience they may have had.

As well as being the basic socialization mechanism through which previous work experiences influence organizational commitment, tenure is likely to be an intervening variable whose effects supersede that past experience. Most public managers cannot simultaneously increase their tenure in a public organization and their private sector experience, as they are

Senior Managers' Organizational Commitment

typically employed in one organization at a time. This means that the effects of the proportion of private relative to public sector experience on organizational commitment may be exerted indirectly through tenure, due to the fact that the proportion of private sector experience decreases the length of position and organizational tenure within the public sector, which, in turn, results in a negative relationship with commitment. Put differently, from a public sector experience perspective, time spent in the public sector mainly matters for commitment in terms of the time an individual spends in the same job or organization. Importantly, such socialization effects may matter for each dimension of commitment, ensuring that as well as imbibing a sense of obligation to serve the public via the organization in which they work, public managers with a higher ratio of private to public sector experience become attached to and feel the need for the employment provided by that organization. Hence, we expect that while the proportion of private sector experience may have a negative relationship with organizational commitment (as proposed in hypothesis 1), this is the product of short position or organizational tenure within the public sector – and therefore advance the following hypotheses:

Hypothesis 3a: Position tenure mediates the relationship between the proportion of private sector experience and organizational commitment

Hypothesis 3b: Organizational tenure mediates the relationship between the proportion of private sector experience and organizational commitment

In testing our mediation hypotheses, the empirically important question is whether tenure only partially reduces the direct effect of the proportion of private sector experience or whether it can fully explain that effect.

DATA AND METHODS

In order to explore the determinants of organizational commitment, we utilize data from the COCOPS survey of high-ranking civil servants in sixteen European countries: Austria, Denmark, Estonia, France, Germany, Hungary, Ireland, Italy, Lithuania, the Netherlands, Norway, Portugal, Serbia, Spain, Sweden and the United Kingdom. The survey was based on a full census of all central government ministries and agencies, including the population of top and higher level public managers in each country. For example, in France, it included top civil servants in all the ministries, prefectures, regional ministerial directorates, departmental directorates, and executive agencies. In Germany, all senior managers in federal and state (Länder) government ministries and agencies were surveyed, while, in the UK, the survey included senior civil servants in all central government departments, devolved governments, and executive agencies (Hammerschmid et al. 2013). These informants are uniquely qualified to provide an expert viewpoint on management and organizational issues within central government.

The survey was implemented as an online questionnaire with standardized versions of the webpage in different languages. It was conducted by separate research teams in each country, with data cleaning and harmonization carried out centrally. The survey was distributed during the same month in 2012 for eleven of the countries included in our study, and in the same month less than a year later in 2013 for the other five countries. In total, the survey was sent out to over 22,000 informants via post and email (using either a personalized access link or an anonymous one). In cases where response rates were low, teams took additional measures, such as phone or postal reminders, to increase the number of survey participants. There were 5,998 answers from the

Senior Managers' Organizational Commitment

sixteen participating countries included in our study, giving an overall response rate of 26.9%. The data are subject to strict anonymity regulations.

Bezes and Jeannot (2018, 5) emphasize that although the COCOPS project sample is not “representative of the real distribution of top civil servants within and among ministries and agencies in each country”, the distribution of responses between different types of central government organization and policy area is nevertheless satisfactory (Bezes and Jeannot 2018). There are some instances of overrepresentation from some organizations (especially the German national employment agency), but the data are, for the most part, balanced. Hence, the COCOPS dataset is a valuable source of information for addressing relatively understudied topics in the field of public administration; in this case, the determinants of senior public managers' organizational commitment. At the same time, while we are not specifically interested in differences across countries, policy areas and types of organizations, we do seek to ensure that the relative generalizability of our results is not biased by country, policy area or organizational effects. To do this, we include controls for policy area and organization type in our analysis, and employ a multi-level modelling approach that incorporates country-level variance. Furthermore, we carry out a series of checks to assess the robustness of our results, which are reported in the sections that follow.

Dependent Variable

The dependent variable, organizational commitment, is a composite measure constructed from five questions rated on a scale from 1 (strongly disagree) to 7 (strongly agree), which asked respondents about their commitment towards their work and organization. Table 1 details the five questions asked in the survey and presents a summary of the descriptive statistics. The questions are adapted from Allen and Meyer (1990) and capture the affective, normative and continuance dimensions of

Senior Managers' Organizational Commitment

organizational commitment. For the purposes of our analysis, we construct a single organizational commitment index by calculating respondents' mean score on the five separate items. This construct has good internal scale reliability ($\alpha=.720$ – see Nunnally 1978). Similar results to those presented below were observed when using a single organizational commitment factor, and when analyzing each of the three dimensions of commitment separately (see Table 5).²

--TABLE 1--

Independent Variables

To establish the salience of respondents' private sector work experience in relation to organizational commitment, we drew upon two questions in the survey asking them about their work experience in the public and private sector. Public sector experience was measured by asking managers to indicate how many years they had worked in the public sector on a five-point scale: 1=less than 1 year; 2=1-5 years; 3=5-10 years; 4=10-20 years; and, 5 =more than 20 years. Using the same scale, respondents were also asked how many years of work experience they had in the private sector. Since survey respondents were managers within public organizations at the time that they completed the questionnaire, this question referred to prior private sector work experience. Although the temporal spacing of these questions was not uniform, it is not uncommon for the temporal dimensions of people's lives or work experience to be conceptualised in terms of key stages – (see for example, the age data in the UK National Census for 2001; Gregerson 1993; Jakobsen and Jensen 2015). Further analysis using dichotomous variables for each category of years of private sector experience revealed that the coefficients for these variables increase in size as the number of years' experience increases, suggesting that our categorical measure of private sector experience behaves like a continuous variable.

Senior Managers' Organizational Commitment

To construct a measure of the proportion of a public managers' work experience spent in the private sector that could capture the potential impact of sector imprinting, we created a ratio of private to public sector work experience. Boardman et al. (2010) deploy a measure of the percentage of a public managers' work experience spend in the private sector, but do not explain the rationale for including this alongside their other measures of sector imprinting. We use a ratio of experience measure because we believe it most effectively captures the relative importance of private versus public sector experience on a manager's values and attitudes. As such, we expect this to be a more accurate instrument for gauging how much their experience of work in the private sector remains imprinted on a manager's values and attitudes than a simple count of years of private experience. A simple count measure could misrepresent the salience of the potential imprinting experience for individuals with few or many years of public service.³ To test the robustness of our findings we estimated our regression models substituting a raw measure of the number of years of private sector experience (as described above), finding virtually identical results (available on request).⁴ Nonetheless, we still favour the proportional measure over that gauging experience alone, because we believe that it encapsulates the concept of imprinting more convincingly than a count measure. The distribution of the sectoral experience in the sample is shown in Table 2.

--TABLE 2--

In Table 3, we report the cross-country differences for the key variables used in our analysis. The table highlights that the ratio of private to public sector experience is typically highest among our sample of senior public managers from Northern European countries, such as Estonia

Senior Managers' Organizational Commitment

and the UK – though also in Portugal, and lowest amongst our sample of managers from France, Germany, and Ireland. Levels of organizational commitment appear to be particularly high among managers from Eastern European countries, such as Hungary and Serbia, but low among managers from wealthier European countries, such as the Netherlands and Sweden. Although we do not investigate specific country differences in the relationships that we investigate, country effects are controlled in our regression estimates through the use of multi-level modelling.

--TABLE 3--

In addition to questions dealing with sectoral work experience, the survey included questions asking respondents about their length of service in their current position and organization. Respondents (again) indicated on a five-point Likert-scale ranging from 1=less than 1 year to 5= more than 20 years, the length of their *position tenure* and *organizational tenure*. This type of ordinal scale has been used in previous studies analyzing the connection between tenure and employee outcomes (Ng and Feldman 2010).

Control Variables

At the individual level, we control first for job characteristics that may influence respondents' commitment to the organization. Managers' level of *decision autonomy* is likely to affect their organizational commitment (Mathieu and Zajac 1990). Hence, we include an index of autonomy constructed using a set of questions asking respondents to indicate on a 7-point Likert scale (1=very low to 7=very high): "In my position, I have the following degree of decision autonomy with regard to: "budget allocations"; "contracting out services"; "promoting staff"; "hiring staff";

Senior Managers' Organizational Commitment

“dismissing or removing staff”; and, “changes in the structure of my organization” (Cronbach Alpha .86). We also control for the *managerial level* of the respondents who were asked, “What kind of position do you currently hold: top, second, third or other hierarchical position?” This information was used to construct a dichotomous variable coded 1 for individuals at the lowest of these managerial levels, and 0 otherwise. Because they exercise less complex administrative and political skills, respondents at lower managerial levels are expected to have lower levels of organizational commitment (Katz and Kahn 1966).

Next, we control for demographic characteristics. To control for the effects of *gender*, a dichotomous variable is constructed by coding female respondents 1 and male respondents 0. Although more women are now employed as senior public managers than in the past, it remains conceivable that they have higher commitment to the organization than men due to the barriers that they overcome to occupy senior positions (Mathieu and Zajac 1990). Respondents' *age* is measured in the survey using five categories (35 or less, 36-45, 46-55, 56-65, and 66 or older). Responses to this question form the basis for an ordinal scale for inclusion in the statistical model. Older respondents are likely to have higher organizational commitment due to the time and effort that they have invested in the organizations that they work (Mathieu and Zajac 1990). Within the survey, *education level* is captured by asking respondents to indicate their highest level of qualification: graduate; post-graduate (master's level); or a doctoral degree. An ordinal scale based on these responses is added to the model. Because more educated individuals have a wider range of external job opportunities, education is expected to be negatively related to organizational commitment (Mathieu and Zajac 1990). The importance of respondents' educational background was also evaluated by asking them to indicate the subject of the highest educational qualification that they had achieved. We then created a dichotomous variable coded 1 for individuals indicating

Senior Managers' Organizational Commitment

that a public administration/political science qualification is their highest educational qualification and 0 otherwise. This variable is akin to other educational background measures used by public administration scholars (e.g. Esteve et al. 2013).

As well as individual-level control variables, organizational-level characteristics were controlled in the statistical model using responses from the survey. Respondents were asked to give an indication of the size of the organization for which they work by assigning it to one of six groups: less than 50 employees; 51-99; 100-499; 500-999; 1000-5000; over 5000 employees. This measure of *organizational size* is treated as an ordinal scale (see Esteve et al. 2013 for a similar approach). Because it is easier to identify with a smaller organization and its goals, organizational commitment may be lower within large organizations (Mathieu and Zajac 1990). Respondents indicated the *type of organization* in which they worked from amongst three different groups: ministries of central government (e.g. the Department of National Education in France); semi-autonomous (or arm-length) agencies in central government (e.g. the Environment Agency in the UK); regional ministries and agencies (e.g. Regional Directorates of the Federal Employment Agency in Germany).⁵ Central ministries were taken as the reference category and dichotomous variables capturing the other types of organizations entered in the statistical models.

Dichotomous variables for the following *policy areas* in which respondents worked were also included in the models: general government; foreign affairs; finance; economic affairs; infrastructure and transportation; defense; justice, public order & safety; employment services; health; other social protection and welfare; education; environmental protection; and, recreation, culture, and religion. Respondents who indicated that they worked in a policy area “other” than those listed above were treated as the reference category. Observations with missing data for our survey items were deleted (2,386 respondents in total) prior to the analysis. In particular, the

Senior Managers' Organizational Commitment

question on private sector experience had over 1,000 missing observations, but there were also a fairly large number of missing observations for tenure, autonomy, education type, education level, age, and gender. Additional multi-level analysis for the entire dataset utilizing multiple imputations revealed similar results to those presented below (available on request).

At the country level, we control for economic factors capturing aspects of the labour market that might influence public manager's organizational commitment. First, we include a measure of the level of unemployment for 2012 in each of the sixteen countries. We expect that in countries with high unemployment public managers will be more committed to their organization due to the presence of fewer other alternatives in the labour market. This indicator has been used in other research evaluating employee attitudes in the public sector (e.g. Van de Walle et al. 2015). Similar results to those presented below were observed when GDP per capita was substituted as a measure of economic development, though as one would anticipate the relationship between the two variables was reversed (available on request).

Second, we add a measure of the public sector expenditure within each country as a percentage of that country's GDP to the model. This is a commonly used measure of public sector size (see Alonso et al. 2015), and we anticipate that public managers will evince lower levels of organizational commitment in countries with a larger market for public sector employees. Substitution of other measures of public sector size (e.g. percentage of workforce employed in the public sector) made no difference to the results presented below (available on request). Likewise, substitution of country fixed effects for our country-level control variables did not affect the results for our main variables of interest, including when the standard errors were clustered at the organization level (available on request).

--TABLE 4—

The data for all of our country-level variables are drawn from Eurostat and OECD sources. The descriptive statistics for all the independent and control variables included in our statistical modelling are presented in Table 4. The correlations between the variables included in the statistical models we present below are shown in Table 5.

--TABLE 5—

Common Method Bias (CMB) and Common Source Bias (CSB) have been argued to be a potentially serious problem in studies, such as ours, mainly based on data from single sources (see e.g. Jakobsen and Jensen 2015 and Favero and Bullock 2015). Although we focus on relationships between independent variables based on factual information, such as the length of work experience in different sectors and tenure, and a dependent variable, organizational commitment, based on self-reported attitudes, we are reliant on data drawn from one source (the COCOPS survey). Hence, while social desirability biases seem unlikely to influence respondents' answers to the factual questions, CMB may affect their answers to our commitment questions due to these being collected at the same time as all the other variables in the survey. Furthermore, although the relevant commitment and autonomy questions were in different parts of the questionnaire, there is a risk that CMB shapes the autonomy-commitment relationship due to potential halo effects (Jakobsen and Jensen 2015). However, there is a very small negative correlation between autonomy and commitment (see Table 4), which suggests halo effects are unlikely in this case. To explore this issue in more depth, we also ran multiple analyses removing a different control variable at a time

Senior Managers' Organizational Commitment

– which did not alter the main results, but subsequent studies could seek to separate the measurement of commitment from that of the variables intended to predict it.

Method

We estimate a series of hierarchical linear regression models, with individuals (level 1) being nested in countries (level 2). This approach enables us to capture clustering effects for individuals from the same country, and can accommodate unobserved heterogeneity between countries via random intercepts (Bryan and Jenkins 2016). In notation form, we model variance at the individual and country-level such that:

$$Y_{ij} = \beta_{0j} + \beta_1 X_{1ij} + \varepsilon_{ij} \quad (1)$$

where

$$\beta_{0j} = \beta_0 + \mu_{0j} \quad (2).$$

Here, Y_{ij} is the individual level dependent variable (i.e. senior public managers' organizational commitment) for individual i ($=1, \dots, N$) nested in country j ($=1, \dots, J$). X_{1ij} is an individual-level covariate (e.g. private sector experience), ε_{ij} the individual-level residuals and μ_{0j} the country-level disturbance term. To guard against the possibility that the standard errors of our estimates are biased downwards we undertake restricted maximum likelihood estimation of the models (Bryan and Jenkins 2016).

STATISTICAL RESULTS

The results of two-level linear regression models estimating the relationship between managerial background and organizational commitment are presented in Table 6. First, the null model was estimated to evaluate how much variation in respondents' commitment to their organization could be attributed to differences across countries, and whether multilevel modelling is actually needed (model 0). Next, we look at the relationships between our control variables and senior public managers' organizational commitment using a random intercept model (model 1). We then estimate the linear effects of private sector experience on organizational commitment including all control variables (model 2). We then add our measures of position tenure (model 3) and organizational tenure (model 4) separately, before including them together (model 5). All estimations were undertaken using Stata 12.0's xtmixed routine.⁶

--TABLE 6 --

The intercept only model shown in Table 6 displays an intraclass correlation of .24, indicating that about 24% of the total variation in senior public managers' organizational commitment can be attributed to country differences. Moreover, a comparison of this model to a non-hierarchical (Ordinary Least Squares) linear model revealed it to be a superior fit ($\chi^2(1)=914.45$, $p<.001$). This highlights that our survey respondents are not independent from each other, and that multilevel modelling is needed to accommodate the nested structure of our data.

When using a multilevel modelling approach, R^2 figures provide ambiguous information on model fit. As such, comparisons of the log likelihood function, the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) from each new model specification should be

Senior Managers' Organizational Commitment

carried out. Decreasing levels of each of these statistics represent improvements in the fit of the model (Robson and Pevalin 2016). The estimates for model 1 represent an improvement in model fit, with the log likelihood, AIC and BIC figures all lower than for model 0. The results for these estimates suggest that several of the control variables may be important determinants of senior public managers' organizational commitment across Europe. As anticipated, autonomy is positively related to organizational commitment,⁷ though being in the lower level of the upper hierarchy does not seem to matter. More generally, male, older and less educated managers have higher levels of organizational commitment, while educational background is unimportant. Managers working in semi-autonomous central government agencies have higher levels of commitment compared to those in Ministries, whilst employment in a regional ministry is unrelated to organizational commitment, as is the size of the organization. At the country level, we find, as anticipated, that the organizational commitment of senior public managers appears to be stronger in countries with high levels of unemployment, but that the size of the public sector is unrelated to that commitment. All of these findings hold when the main independent variables of interest are added to the model.

Turning to the relationship between the proportion of private sector experience and organizational commitment shown in model 2, we can observe that the fit of the model has improved for two out of three of our indicators of fit (the log likelihood and AIC statistics). At the same time, the coefficient for the proportion of private sector experience is statistically significant and negative as predicted, providing support for the first hypothesis that managers with a higher proportion of private sector work experience will be less committed to the public organization in which they currently work. This implies that due to the time they have spent in private firms, some managers may exhibit attitudes and values that are contrary to commitment to their public

Senior Managers' Organizational Commitment

organization.⁸ Inclusion of the measure of position tenure in model 3 also leads to improvements in the fit of the model – in this case for all three measures of model fit. The coefficient for position tenure is statistically significant and positive as expected, thereby supporting the second hypothesis that longer service in their current job will make senior public managers more committed to the organization for which they work.

Substituting the measure of organizational tenure for that of position tenure improves the model fit (see model 4, Table 6). Moreover, the coefficient for organizational tenure is positive and statistically significant, and is noticeably larger than that for position tenure. At the same time, when organizational tenure is included, the proportion of private sector experience is no longer a statistically significant determinant of organizational commitment. This suggests that organizational tenure may be a more important influence on managers' commitment to the organization than the proportion of private sector experience, and that it may even fully mediate the negative relationship between such experience and organizational commitment. The inclusion of both measures of tenure simultaneously in model 5 underlines that organizational tenure is a critical determinant of organizational commitment, with the measure of position tenure failing to achieve statistical significance along with the measure of the proportion of private sector experience.

The results shown in Table 6 are replicated when we take the multidimensionality of organizational commitment into account. Table 7 presents our six models of commitment for each of its three dimensions: affective, continuance and normative. Again, we find that the proportion of private experience is negatively related to commitment, but that this relationship is mediated by position and organizational tenure. Interestingly, the negative relationship between private experience and affective commitment appears to be slightly weaker than that for the other

Senior Managers' Organizational Commitment

dimensions, and is fully rather than partially mediated by position tenure. Hence, it is conceivable that sector imprinting may play somewhat less of a role in determining affective commitment than continuance or normative commitment.

--TABLE 7--

To explore further whether the negative effects of the proportion of private sector experience for organizational commitment are mediated by position and organizational tenure, we develop three further models estimating whether the ratio of private to public sector experience can explain tenure (see Table 8). The intercept only models shown in Table 8 explain about 10% of the total variation in position and organizational tenure, with both models having superior fit to a linear model ($\chi^2(1) = 323.51$ and 278.27 , $p < .001$). This again highlights the need for multilevel modelling. Critically, we find statistically significant negative relationships between private sector experience and position and organizational tenure. This suggests that both aspects of tenure may mediate the impact of private sector experience on senior public managers' commitment to the organizations in which they work. Sobel tests confirm that the association between commitment and organizational and positional tenure significantly mediate that for private sector work experience ($z' = -8.94$, $p < 0.01$ and $z' = -2.72$, $p < 0.01$ respectively).

--TABLE 8--

To assess the robustness of our statistical results, we followed Fernández-Gutiérrez and Van de Walle (forthcoming) and re-estimated all of our models excluding responses from one

Senior Managers' Organizational Commitment

country at a time. This procedure did not alter our main findings. In addition, we re-estimated the models excluding responses from one organization type at a time and one policy area at a time; procedures which also did not alter our findings. Nevertheless, to evaluate further the robustness of our results we added dichotomous variables capturing the administrative tradition associated with different groups of countries to the models: Anglo-Saxon (reference category); Continental; Scandinavian; Southern; and Transitional (Hammerschmid et al. 2007). Inclusion of these country-group variables again did not alter the findings for our main independent variables.

To summarize the results from all of the different models, we find that there is a significant negative effect of the proportion of private sector experience on organizational commitment when we do not include position or organizational tenure, and a negative effect of private experience on position and organizational tenure. When position tenure is added to the model predicting organizational commitment there is a weakened connection between private sector experience and commitment. There is no significant relationship between private sector experience and organizational commitment at all when organizational tenure is included, while organizational tenure has a significant effect on organizational commitment. These results suggest that position tenure may partially mediate the private sector experience-commitment relationship, but that there is full mediation in the case of organizational tenure (according to the standard way of perceiving mediation – Baron and Kenny 1986). Overall, though, given that position tenure loses statistical significance when organizational tenure is included alongside it in the models predicting commitment, it would seem that it is only through its negative relationship with organizational tenure that the proportion of private sector work experience influences organizational commitment.

DISCUSSION AND CONCLUSIONS

This paper indicates that the proportion of private sector experience and position tenure may influence senior public managers' organizational commitment, yet only when organizational tenure is not accounted for. In fact, organizational tenure appears to be the main driver of organizational commitment. Not only does it have a strong direct relationship with the commitment of senior public managers, it also shapes the relationship between the proportion of private sector work experience and commitment. This may be because public managers with private experience have simply spent less time in the public sector or because they change organizations more regularly. When organizational tenure is included in our analysis, we do not find a significant effect for either the proportion of private sector experience or position tenure. Further analysis identified a strong negative relationship between private experience and organizational tenure, and evidence of full mediation of the connection between the proportion of private sector experience and organizational commitment. Hence, it seems that private experience weakens organizational commitment among senior public managers because it is associated with shorter organizational tenure.

Thus, the organizational commitment of public managers may not be directly influenced by the proportion of private sector experience – unlike job satisfaction (Boardman et al., 2010). Rather, socialization effects may predominate. Future studies could therefore benefit from trying to understand when private experience matters – and also how it matters (e.g. directly or indirectly). The strength of the mediating mechanism for organizational tenure that we identify may be specific to the relationship between such tenure and organizational commitment – which theoretically and empirically are very closely connected. Overall, our analysis suggests that there is a positive direct relationship between organizational tenure and organizational commitment.

Senior Managers' Organizational Commitment

This finding supports the insights from previous research in public and private organizations regarding the relationship between organizational tenure and commitment (e.g. Meyer et al. 2002 Steinhaus and Perry 1996), and that organizational tenure is a stronger predictor of commitment than position tenure (see Mathieu and Zajac 1990). We believe this is a robust finding, as we have a large multi-country data set, include relevant controls, utilise appropriate multi-level estimation techniques and undertake several robustness checks. The strong relationship between organizational tenure and organizational commitment that we identify speaks to the long-standing debate about the problems posed by long tenure in the public sector (Dunleavy and Hood 1994). Our results suggest that, with regard to commitment, the problems may be overstated by advocates of public management reform (e.g. Ketelaar et al. 2007), as organizational tenure is positively related to senior public managers' commitment, something that is likely to benefit public organizations and citizens (Bryer 2007). The literature on bureaucracy indicates that long tenure may increase commitment towards an organization's norms and values (Olsen 2006). However, it is possible that this may follow a nonlinear pattern or be a product of the high PSM among senior public managers. To provide a preliminary exploration of these issues we ran a series of additional model specifications.

First, we assessed the potential nonlinearity in the main relationships that we study, by adding squared versions of the key independent variables to our models, which failed to reveal the presence of a statistically significant curvilinear relationship between either position or organizational tenure and organizational commitment. Second, we included a measure capturing respondents' general attitudes towards public service in the models to control for the possibility that this influences their commitment to the organization – those with higher levels of PSM are more committed to their organization, especially those without private sector experience (see

Senior Managers' Organizational Commitment

Crewson 1997), which could also reflect the person-environment fit argument (Wright and Pandey 2008). These additional tests did not improve the fit of our models or alter the main results. Although we did identify a positive relationship between our single-item measure of PSM and commitment, a very low response rate for this item means this finding should be treated with caution.

Despite the strengths of our approach, the study has a number of limitations that could form the basis for further research. From a methodological point of view, a sample size of sixteen (countries) for the upper-level of a multi-level analysis may not be sufficient for random intercept models to produce unbiased estimates (Stegmueller 2013). At the same time, our investigation is restricted to a sample of countries drawn from a very distinctive context – Western European central government. Hence, subsequent studies could investigate whether our findings are replicated in a larger sample of countries and at other levels of government. In addition, while the large multi-country data we collected would have been very difficult to compile using multiple sources or methods, researchers should seek to investigate senior public managers' organizational commitment using research designs that can more effectively address CMB/CSB than we are able to on this occasion.

From a theoretical perspective, one potential explanation for our findings is person-organization fit, which may explain why senior public managers with longer tenure appear to be more committed to their organizations – they have always shared the values of those organizations. Managers with more public sector relative to private sector experience could also have a higher level of commitment due to person-environment or publicness fit – which may, in turn, be explained by their longer tenure. Due to data limitations, we are unable to investigate these possibilities, but they could be the focus for subsequent research. In addition, better to separate the

Senior Managers' Organizational Commitment

effects of the different types of tenure, there is a need for more comprehensive career information for senior managers. Detailed job history data could facilitate in-depth analysis of socialization effects. For example, whether people coming from another sector understand the traditions and culture of the public organization in which they work, the trade language or how to get things done, as well as whether they get along with their new colleagues (Chao et al. 1994). This potential negative effect of private sector experience could be especially challenging at the beginning of a public management career.

A final limitation of our study is that we do not have information on the precise timing of respondents' private sector experience – and therefore we have to rely on the ratio measure. As we investigate sector imprinting, we propose that the proportion of private relative to public sector experience captures sector imprinting more effectively than the absolute length of sectoral experience. The next step for future research is to investigate the timing of the sector experience i.e. how early or late private sector experience influences organizational commitment, and whether the mediating effect of tenure varies depending on the kind of private sector career experienced by sector switchers.

In conclusion, our findings are not necessarily an argument for keeping senior public managers in the same position or organization. Although longer tenure positively influences organizational commitment, there is no guarantee that the commitment signified by long service is associated with markedly superior job performance (Wright and Bonett 2003). Future studies should, therefore, try to disentangle the relationships between organizational tenure, organizational commitment and the performance of public managers. Nevertheless, whatever the performance effects of tenure and commitment, our results do indicate that the positive relationship between organizational tenure and commitment may be more important than whether people have private

sector experience or whether they have long position tenure. Hence, the dynamics of organizational imprinting may be more critical to understanding the nature of senior public managers' organizational commitment than the dynamics of sectoral imprinting. This insight should provide further encouragement for those researchers and policy-makers seeking to understand the ways in which inter-organizational differences affect public management outcomes.

NOTES

1. Researchers offer contrasting arguments for non-linearity in the tenure-commitment relationship. On the one hand, it can be argued that when entering a new position or organization commitment is high, but then people encounter challenges getting established and therefore commitment declines, but later rises as initial problems getting accepted are overcome, and may even generate a wish to stay on after reaching retirement age. Yet, the opposite may also be argued: that commitment gradually increases as people become more and more socialized into their position and organization until it turns negative when they grow tired of their existing work duties or are nearing retirement and no longer care, need or feel obliged to carry on working. Since the available evidence points towards a linear positive tenure-commitment relationship and there are contrasting perspectives on potential nonlinearity in that relationship (Beck and Wilson 2000), we do not propose a nonlinear hypothesis here, but we carry out tests for potential nonlinearity in our models – see page 28 for a discussion of the results.

2. The internal scale reliability for affective commitment and normative commitment are low ($\alpha=.463$ and $\alpha=.525$ respectively), so the results for the separate commitment dimensions should be interpreted with greater caution than those for our single commitment index. Still, the correlations between the two survey items included in the measures of affective and normative commitment are statistically significant at $p<.001$, so we have some confidence that the items are gauging similar phenomena.

3. Although the ratio measure implies a manager who has one year's experience in both public and private organizations could be regarded as the same as another with ten years' experience in both sectors, short durations of twin sectoral experience are extremely rare among the senior managers we surveyed. Indeed, the vast majority of respondents have spent more than 10 years in the public sector, with nearly half having been employed in the sector for more than 20 years (see Table 2). All of which indicates that a greater proportion of private relative to public sector experience seems likely to be an effective way to capture imprinting effects. Nevertheless, to cast further light on whether our results might be biased by the propensity of most of our survey respondents to have relatively little private sector experience, we re-ran our analysis excluding managers with less than

Senior Managers' Organizational Commitment

a year of private work experience. This additional analysis produced near-identical results to those presented for the full sample (available on request).

4. We did not include the private experience variable alongside the proportional measure in these models, as the correlation between the two is extremely high (over 0.8), rendering the results susceptible to a high degree of collinearity.

5. Unfortunately, we are unable to provide a full list of the specific participating organizations in each country due to the confidentiality requirements associated with carrying out the survey.

6. We also tested whether our models suffered from severe multicollinearity. Since the average VIF score is 1.17, with no variable having a VIF score exceeding 1.7, we conclude that severe multicollinearity is not an issue in our models.

7. We ran our models again using separate measures of HR, policy and financial autonomy identified using factor analysis, and there was no change to the associations between private sector experience, tenure and commitment that we identify. However, only HR autonomy was consistently positively associated with all four of our commitment measures, suggesting that the freedom to hire, fire and promote employees is an especially important determinant of senior managers' organizational commitment. In addition, policy autonomy was positively related to affective commitment, and financial autonomy was positively related to continuance commitment, hinting at the possibility that the different dimensions of decision autonomy may have a distinctive connection with senior managers' attitudes – something that would be valuable to explore in a subsequent study. In addition, we estimated our models without the autonomy measure, and our main findings still hold.

8. To test whether these findings might be the product of selection biases associated with choosing to switch sector, we estimated two-step Heckman selection models with the first stage of the model predicting managers having any private sector experience at all, and the second stage predicting organizational commitment with a correction for potential selection effects. To identify a selection effect associated with having private sector experience, we only included education type (public administration or political science) in the first stage of the model as it is (negatively) correlated with private experience, but unrelated to the dependent variable for the second stage (i.e. commitment). The results of these estimations were almost identical to those presented in the paper and the Lambda statistic in the second stage of the model was not statistically significant, implying an absence of self-selection bias.

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Senior Managers' Organizational Commitment

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Senior Managers' Organizational Commitment

TABLE 1

Organizational commitment measure

When thinking about my work and the organisation I work for:	Mean	Min	Max	S.D.
<i>Affective commitment</i>				
I really feel that the organisation's problems are my own	4.82	1	7	1.74
I would be very happy to spend the rest of my career with this organisation	4.69	1	7	1.85
<i>Continuance commitment</i>				
It would be very hard for me to leave my organisation right now, even if I wanted to	4.33	1	7	1.95
<i>Normative commitment</i>				
I was taught to believe in the value of remaining loyal to one organisation	4.69	1	7	1.96
Things were better in the days when people stayed with one organisation for most of their career	2.87	1	7	1.84
Commitment measure	4.28	1	7	1.28

N=3,613

TABLE 2

Distribution of public and private sector experience (% of respondents) and mean commitment

	Less than 1 year	1-5 years	5-10 years	10-20 years	More than 20 years
Public sector experience	3.49	4.40	10.74	32.58	48.80
Commitment	4.75	4.11	4.14	4.18	4.36
Affective	5.05	4.62	4.59	4.62	4.88
Normative	4.52	3.69	3.59	3.74	3.81
Continuance	4.60	3.95	4.36	4.19	4.42
Private sector experience	49.57	29.75	10.05	7.61	3.02
Commitment	4.38	4.17	4.28	4.33	4.25
Affective	4.87	4.61	4.80	4.91	4.93
Normative	3.87	3.65	3.80	3.80	3.54
Continuance	4.43	4.31	4.20	4.25	4.29

N=3,613

TABLE 3

Key descriptive statistics across countries (means/standard deviations)

	N	Public sector experience (rated 1-5)	Private sector experience (rated 1-5)	Ratio private/public experience	Commitment (rated 1-7)
Overall	3613	4.19/1.02	2.58/1.34	.46/.54	4.28/1.28
Austria	281	4.57/1.74	2.62/1.05	.40/.41	4.18/1.18
Denmark	108	4.27/1.77	2.35/1.10	.36/.40	3.71/1.13
Estonia	233	3.78/1.88	2.88/1.40	.61/.72	4.39/1.16
France	356	4.38/1.84	2.05/1.10	.27/.34	3.88/1.09
Germany	289	4.70/1.62	2.40/1.97	.32/.30	4.09/1.01
Hungary	173	3.86/1.02	2.59/1.48	.49/.59	5.20/1.07
Ireland	191	4.65/1.64	2.29/1.28	.32/.38	4.03/1.09
Italy	106	3.99/1.89	2.42/1.37	.42/.50	4.55/1.12
Lithuania	267	4.04/1.82	2.70/1.52	.48/.55	4.94/1.32
Netherlands	135	4.39/1.91	2.43/1.53	.44/.67	3.25/1.00
Norway	233	4.25/1.88	3.03/1.45	.56/.58	3.51/1.04
Portugal	215	2.89/1.82	2.47/1.90	.74/.50	4.88/1.03
Serbia	410	4.03/1.03	2.44/1.53	.49/.71	5.31/1.21
Spain	200	4.25/1.86	2.60/1.26	.43/.45	4.39/1.23
Sweden	283	4.38/1.82	3.04/1.29	.55/.54	3.40/1.03
United Kingdom	152	4.31/1.94	3.10/1.67	.60/.60	3.89/1.06

TABLE 4

Descriptive statistics

	Mean	SD	Min	Max	N
Private/public sector experience	0.46	0.54	0	5	3613
Organisational Tenure	3.27	1.24	1	5	3613
Position Tenure	2.41	0.98	1	5	3613
Education type (public administration/political science)	0.13	0.34	0	1	3613
Autonomy	3.55	1.52	1	7	3613
Gender	0.37	0.48	0	1	3613
Education level	2.00	0.58	1	3	3613
Age	2.91	0.89	1	5	3613
Lower hierarchical position	0.78	0.42	0	1	3613
Central agency	.51	.50	0	1	3613
Regional ministry	.07	.25	0	1	3613
Organization size	3.54	1.52	1	6	3613
Unemployment rate (2012)	11.74	6.84	3.2	25	16
Government expenditure as % of GDP (2012)	47.21	5.70	36.1	58	16

Senior Managers' Organizational Commitment

TABLE 5
Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Commitment index																
2. Affective commitment	.826*															
3. Normative commitment	.833*	.473*														
4. Continuance commitment	.730*	.475*	.435*													
5. Experience ratio	-.025	-.008	-.021	-.037												
6. Position tenure	.116*	.104*	.094*	.078*	-.184*											
7. Organisational tenure	.181*	.157*	.148*	.125*	-.326*	.532*										
8. Education type (public adm./ political science)	-.071*	-.058*	-.075*	-.029	-.087*	-.025	-.021									
9. Autonomy	-.096*	.011	-.169*	-.058*	.049	-.030	-.073*	.051								
10. Lower executive	-.135*	-.110*	-.124*	-.083*	-.050	.089*	.052	.030	.183*							
11. Age	-.018	-.061*	.023	-.007	-.015	.052	.115*	.013	-.341*	-.094*						
12. Gender	.117*	.164*	.053	.057*	-.061*	.318*	.291*	-.049	.110*	.050	-.176*					
13. Central agency	-.016	-.021	-.023	.016	0.025	-.021	-.030	-.058*	-.073*	-.043	.124*	-.111*				
14. Regional ministry	.086*	.093*	.056*	.056*	.134*	.058*	.037	-.069*	.236*	.083*	-0.045	.050	.063*			
15. Organization size	-.015	-.016	.002	-.030	-.033	0.035	.011	-.022	.008	-.046	-.190*	.061*	-.073*	-.271*		
16. Unemployment rate (2012)	-.097*	-.051	-.113*	-.065*	-.064*	-.077*	.130*	.066*	.052	-.018	.060*	.006	-.055*	-.044	-.002	
17. Government expenditure as % of GDP	.346*	.257*	.335*	.219*	.027	-.049	-.026	-.098*	-.302*	-.276*	.085*	-.119*	.100*	-.009	.098*	-.140*

N=3613. Significance – *p<.01

TABLE 6
Determinants of organizational commitment

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5
Private/public sector experience			-.122** (.034)	-.098** (.035)	-.011 (.036)	-.011 (.036)
Position tenure				.083** (.021)		-.004 (.023)
Organisational tenure					.171** (.017)	.173** (.019)
Education type (public adm./political science)		.058 (.055)	.047 (.055)	.047 (.055)	.065 (.054)	.065 (.054)
Autonomy		.095** (.015)	.096** (.015)	.099** (.015)	.107** (.015)	.107** (.015)
Education level		-.107** (.039)	-.108** (.039)	-.108** (.038)	-.100** (.038)	-.100** (.038)
Lower executive		.053 (.050)	.050 (.050)	.031 (.050)	-.022 (.049)	-.021** (.049)
Age		.304** (.022)	.299** (.022)	.270** (.023)	.228** (.022)	.229** (.023)
Female		-.103** (.039)	-.105** (.039)	-.105** (.039)	-.101** (.038)	-.101** (.038)
Central agency		.207** (.044)	.219** (.044)	.207** (.043)	.182** (.043)	.182** (.043)
Regional ministry		.127 (.103)	.139 (.103)	.111 (.103)	.087 (.102)	.088 (.102)
Organization size		.016 (.013)	.014 (.013)	.016 (.013)	-.005 (.013)	-.006 (.013)
Unemployment rate (2012)		.071** (.025)	.072** (.025)	.072** (.025)	.073** (.025)	.073** (.025)
Government expenditure as % of GDP (2012)		-.015 (.028)	-.016 (.028)	-.015 (.028)	-.012 (.028)	-.012 (.028)
(Constant)	4.226** (.157)	3.071* (1.423)	3.142* (1.429)	2.927* (1.421)	2.640† (1.422)	2.646 (1.423)
-2Log Likelihood	-5576.03	-5460.20	-5333.33	-5451.42	-5410.17	-5413.02
AIC	11158.06	10972.39	10966.70	10958.84	10876.34	10884.04
BIC	11176.63	11133.39	11133.90	11132.23	11049.72	11063.62
Intra Class Correlation	.237	.245	.247	.246	.251	.251

N= 3,613; countries = 16. Policy area fixed effects not shown. † p<0.1; * p<0.05; ** p<0.01

TABLE 7

Determinants of organizational commitment dimensions

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Affective Commitment</i>						
Private/public sector experience			-.078† (.041)	-.056 (.042)	0.023 (.043)	0.023 (.043)
Position tenure				.076** (.025)		-0.003 (.027)
Organisational tenure					0.156** (.021)	0.157** (.023)
(Constant)	4.756** (.024)	2.657* (1.330)	2.702** (1.334)	2.505† (1.328)	2.245† (1.328)	2.249† (1.329)
-2Log Likelihood	-6466.26	-6099.32	-6099.78	-6097.91	-6074.26	-6076.93
AIC	12936.52	12250.64	12253.56	12251.82	12204.52	12211.86
BIC	12948.90	12411.64	12420.75	12425.20	12377.90	12391.44
Intra Class Correlation	.123	.159	.160	.158	.160	.160
<i>Normative Commitment</i>						
Private/public sector experience			-.130** (.042)	-.104** (.043)	-.012 (.044)	-.012 (.044)
Position tenure				.090** (.026)		-.002 (.028)
Organisational tenure					.182** (.021)	.183** (.023)
(Constant)	3.781** (.026)	2.897 (1.855)	2.972 (1.861)	2.741 (1.853)	2.438 (1.857)	2.442 (1.857)
-2Log Likelihood	-6751.72	-6182.95	-6180.38	-6176.98	-6146.14	-6148.79
AIC	13507.44	12417.89	12414.77	12409.97	12348.28	12355.59
BIC	13519.82	12578.89	12581.96	12583.35	12521.66	12535.17
Intra Class Correlation	.281	.271	.273	.272	.273	.276
<i>Continuance Commitment</i>						
Private/public sector experience			-.191** (.059)	-.166* (.060)	-.073 (.062)	-0.074 (.062)
Position tenure				.085** (.036)		-.007 (.039)
Organisational tenure					.180** (.030)	.182** (.033)
(Constant)	4.325** (.032)	4.342** (1.182)	4.453** (1.183)	4.235** (1.176)	3.930** (1.172)	3.942** (1.174)
-2Log Likelihood	-7533.36	-7391.91	-7388.57	-7388.17	-7372.84	-7375.14

Senior Managers' Organizational Commitment

AIC	15070.73	14835.82	14831.14	14832.34	14801.69	14808.29
BIC	15083.11	14996.82	14998.34	15005.73	14975.07	14987.86
Intra Class Correlation	.087	.054	.054	.053	.053	.053

N= 3,613; countries = 16. Control variables not shown. † p<0.1; * p<0.05; ** p<0.01

TABLE 8

Determinants of position and organizational tenure

	Position tenure			Organizational tenure		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
Private/public sector experience			-.292 (.027)			-.650 (.033)
Education type (public admin/political science)		.034 (.045)	.007 (.044)		-.044 (.056)	-.104 (.053)
Autonomy		-.038 (.012)	-.034 (.012)		-.071 (.015)	-.062 (.014)
Education level		.011 (.031)	.011 (.031)		-.036 (.039)	-.037 (.037)
Lower executive		.241 (.040)	.233 (.039)		.438 (.050)	.420 (.048)
Age		.365 (.017)	.353 (.017)		.440 (.022)	.414 (.021)
Female		-.002 (.031)	-.006 (.031)		-.013 (.039)	-.022 (.037)
Central agency		.111 (.035)	.141 (.035)		.154 (.044)	.220 (.042)
Regional ministry		.295 (.083)	.321 (.082)		.240 (.104)	.300 (.098)
Organization size		-.017 (.011)	-.021 (.010)		.123 (.013)	.115 (.013)
Unemployment rate (2012)		-.011 (.012)	-.011 (.012)		-.011 (.017)	-.010 (.014)
Government expenditure as % of GDP (2012)		-.013 (.013)	-.014 (.013)		-.019 (.018)	-.022 (.016)
(Constant)	2.391 (.078)	2.413 (.724)	2.584 (.689)	3.236 (.098)	2.543 (.975)	2.922 (.859)
-2Log Likelihood	-4880.90	-4691.19	-4637.57	-5757.12	-5492.22	-5309.94
AIC	9767.81	9434.38	9329.14	11520.24	11036.45	10673.87
BIC	9786.39	9595.38	9496.33	11538.82	11197.45	10841.07
Intra Class Correlation	.098	.102	.095	.096	.120	.102

N= 3,613; countries = 16 Policy area fixed effects not shown. † p<0.1; * p<0.05; ** p<0.01