

Locus of Control and Labor Market Sorting: The Moderating Role of Motives¹

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Abstract

Non-cognitive skills, such as the Big Five personality traits, determine many work and behavioral outcomes, such as labor market sorting. Likewise, numerous studies have shown that motives predict public versus private sector employment. This study is the first to investigate whether the interaction of motives and a further form of non-cognitive skills, namely locus of control, results in public versus private sector employment. Using a longitudinal German dataset, I determine that intrinsic motives (importance of civic engagement) moderate the relationship between locus of control and public sector employment, whereas the interaction of extrinsic motives (importance of career) and locus of control leads to private sector employment. Selection patterns at the start of the career and during the career explain a major part of the results. The findings are largely robust for revealed preferences, hold for the occupation groups of managers and professionals, and are driven by men and individuals without a migration background.

Keywords: locus of control; intrinsic motivation; extrinsic motivation; public sector employment; private sector employment; selection.

JEL classification: C13; H1; J01; J45; M5

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1. Introduction

Non-cognitive skills are powerful personality constructs that determine a number of life outcomes in the work and private domain (Barrick and Mount, 1993; Dohmen and Falk, 2010; Judge et al., 1998, 1999, 2000, 2002b; Mueller and Plug, 2006; Nyhus and Pons, 2005; Steel et al., 2008). In this paper, I will make use of locus of control as one form of non-cognitive skills.

The term *locus of control* was initially proposed by Rotter (1966)², who defined this construct as “a generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one’s own behavior and its consequences” (Rotter, 1966, p. 2). The construct distinguishes internal and external locus of control. Individuals with an internal locus of control, or internals, tend to believe that they are the masters of their fate, and therefore, they can influence and control outcomes through their actions, decisions, and behaviors. In contrast, externals tend to believe that they do not have direct control over their life outcomes and perceive themselves in a passive role in relation to the external environment. Hence, externals primarily attribute outcomes to fate, chance, and luck or to powerful other people (e.g., Cobb-Clark et al., 2014; Krause, 2013; Rotter, 1966, 1990; Stiglbauer, 2017). Widespread literature has found several advantages in various life and labor market outcomes for individuals who score high in internal locus of control (e.g., Cobb-Clark and Tan, 2011; Cobb-Clark et al., 2016; Erez and Judge, 2001; Martin et al., 2005; Organ and Greene, 1974; Spector and O’Connell, 1994).³

² The concept of locus of control stems from the social learning theory (Rotter, 1954, 1955, 1960), which has the objective of explaining individual behavior in complex social situations. The literature further describes locus of control as a non-cognitive skill or personality trait (see, e.g., Cobb-Clark, 2015; Piatek and Pinger, 2016). I use these terms synonymously in the present paper.

³ To give an overview, individuals with an internal locus of control score higher in, for example, life satisfaction (e.g., Bhagat and Chassie, 1978; Buddelmeyer and Powdthavee, 2016; Cobb-Clark, 2015; Judge et al., 1998; Verme, 2009), and job satisfaction (e.g., Andrisani and Nestel, 1976; Judge and Bono, 2001; Judge et al., 2000, 2002a; Martin et al., 2005; Mitchell et al., 1975; Spector, 1982), follow a healthier life (Cobb-Clark et al., 2014; Mendolia and Walker, 2014), and they show higher organizational commitment (e.g., Ng et al., 2006; Reitz and Jewell, 1979) than their external counterparts do.

Existing literature also shows that locus of control is relevant for selection patterns and performance in the labor market. Thus, internals tend to self-select into jobs with performance appraisals (Heywood et al., 2017); furthermore, they are more career oriented and exhibit more career success (Cheng et al., 2013; Judge et al., 2000; Ng et al., 2006; Spector, 1982; Wang et al., 2010), perform better in their jobs (Anderson, 1977; Bhagat and Chassie, 1978; Judge and Bono, 2001; Spector, 1982; Wang et al., 2010), earn higher pay (Heineck and Anger, 2010; Piatek and Pinger, 2016), and have a faster earning growth (Schnitzlein and Stephani, 2016) than their external counterparts do. It may be argued that these aspects are more consistent with work in the private sector compared with the public sector: The private sector enables individuals to negotiate their wages. Moreover, it provides more bonus payment systems and performance appraisals than the public sector does (e.g., Ghinetti, 2007; Luechinger et al., 2010a; Rainey and Bozeman, 2000). However, in their study, Ayaita et al. (2018) considered locus of control as a control variable in a robustness check and determined that internal locus of control is weakly positively related to public sector employment.⁴

This study argues that the relationship between locus of control and sector of employment depends on the type of motivation. Thus, it is the first study considering whether locus of control, depending on the prevalent type of either intrinsic or extrinsic motive, predicts different sorting patterns into public or private sector employment. Existing literature has shown that there is a strong relationship between different motives and the employment sector (e.g., Ayaita et al., 2018; Crewson, 1997; Dur and Zoutenbier, 2014, 2015; Frank and Lewis, 2004; Georgellis et al., 2011; Houston, 2000, 2006; Vandenabeele, 2008). In addition, literature on personality has emphasized that the understanding of personality in the workplace is a “very complex undertaking” (Mount et al., 2003, p. 236). Therefore, prior research stresses the consideration of motives in order to understand how non-cognitive skills relate to several

⁴ As personality is not the focus of their study, they do not provide any reasons for this result.

workplace outcomes (e.g., Barrick and Ryan, 2003; Barrick et al., 2003; Gellatly, 1996; Johnson, 2003). Thus, for example, several studies have ascertained that motives are an explanatory mechanism when investigating the association between personality and performance (e.g., Barrick et al., 2003; Johnson, 2003). Moreover, further research has suggested that specific motives can explain the relationship between personality and counterproductive work behavior (e.g., Cullen and Sackett, 2003). Therefore, I assume that motives may also moderate the relationship between locus of control and the employment sector for several reasons. An internal locus of control relates to a proactive mindset (Buddelmeyer and Powdthavee, 2016; Miller et al., 1982; Rotter, 1966), taking responsibility for own life and work outcomes (e.g., Ng et al., 2006; Rotter, 1966; Spector, 1982), and the belief that own efforts will lead to rewards (e.g., Coleman and DeLeire, 2003; Spector, 1982; Stiglbauer, 2017). How this mindset relates to self-selection into the private versus public sector will depend on intrinsic versus extrinsic motives. Intrinsic motivation will increase the probability of public sector employment among those with a more internal locus of control because job activities in the public sector enable employees to more proactively follow or realize a self-concept (e.g., serve the community) compared with the private sector (e.g., Francois, 2000; Perry et al., 2010). Individuals with an internal locus of control believe that, in the public sector, their commitment will be rewarded in the form of intrinsic rewards (e.g., feeling of self-worth, sense of accomplishment, etc.). Likewise, I hypothesize that the opposite is true for private sector employees: Employees with a high sense of internal locus of control and extrinsic motives will prefer to be employed in the private sector, where they can proactively determine their life/work outcomes by pursuing a utility concept. The private sector offers more opportunities and allows individuals to follow or maximize on this utility concept by providing them many extrinsic rewards (e.g., Ghinetti, 2007; Luechinger et al., 2010a; Rainey and Bozeman, 2000), such as more career options, promotion opportunities, bonus payment systems, performance appraisals, and so on.

As individuals with an external locus of control, *inter alia*, believe that life outcomes are outside their personal control, and are therefore matters of chance, luck, and fate or depend on powerful others (e.g., Ng et al., 2006; Stiglbauer, 2017; Verme, 2009), I argue that they make fewer goal-directed decisions in terms of sector selection, and thus, do not strategically self-select into one labor sector.

The present research extends our understanding of the relationship between personality (including motives) and selection in the labor market. It is also practically relevant because it is important for employers to know the motives and personality traits of their potential employees to choose suitable candidates who will improve and increase the outcomes of a firm. In addition, if employers know the motives and personality traits of a potential employee, they can offer appropriate work areas and incentive structures (Delfgaauw and Dur, 2007, 2008, 2010), where employees with appropriate characteristics can deliver their best performance. Especially, if employers have job applicants who exhibit an external locus of control, they will have the possibility to offer them suitable jobs that are more consistent with their personality. Therefore, this study could help optimize employers' candidate selection process. Likewise, it is important for potential candidates (especially for graduates entering the labor market the first time) to know in what type of labor sector (private versus public) they can apply their motives and non-cognitive skills best to gain returns on their investments (e.g., through utility maximization or self-concepts).

I empirically examine the predictions using the large-scale, representative data from the German Socio-Economic Panel (Wagner et al., 2007). Thereby, I consider 66,291 observations of 13,047 individuals over the time span 2005-2016. First, I investigate whether there is an association of the combination of motives and locus of control with public versus private sector employment. Second, I use a subsample for examining whether the research question can be explained by sorting patterns. In this vein, I focus on the year before graduates enter their first

job and the year before employees change their current labor sector (from public to private sector and vice versa) during the career to study selection effects without reverse causality.

The results reveal that motives moderate the association between locus of control and public versus private sector employment. Especially, an increase in importance of civic engagement by 1 standard deviation significantly rises the relationship between locus of control and public sector employment by 0.8 percentage points (pp) on average. In contrast, an increase in importance of career by 1 standard deviation significantly increases the association between locus of control and private sector employment by 0.6 pp on average. The results remain when the selection sample is considered, especially for individuals entering the labor market for the first time. Furthermore, extrinsic motives (importance of career) moderate the relationship between locus of control and changes to the private sector during the career. Several robustness checks show that the results are largely robust in terms of revealed preferences, such as donated labor or voluntary activities. With respect to occupational groups, the results are robust for managers and professionals. Furthermore, they are driven by individuals without a migration background. For individuals with a migration background, only the interaction between extrinsic motives (importance of money and career) and internal locus of control leads to attraction or selection into the private sector directly before the start of the career and during the career. The results are further driven by men; for women, the findings show that motives do not moderate the relationship between locus of control and employment sector. To the best of my knowledge, the main results and the findings of the robustness checks are new in the literature: No previous study has considered whether motives moderate the association between locus of control and sector of employment.

The paper proceeds as follows: Section 2 details the theoretical framework and related literature. Here, I especially analyze the particularities of locus of control and examine how motives moderate the association between locus of control and public versus private sector

employment. In this way, I derive hypotheses on the relationship between the interaction of motives and locus of control on sorting patterns into public versus private sector employment. Section 3 introduces the dataset by describing the survey, sample, as well as measures, and it provides summary statistics of the main variables. In Section 4, I describe the econometric framework. Section 5 constitutes the results, and section 6 concludes.

2. Theoretical framework and related literature

2.1 Locus of control, motives, and sorting into the public versus private sector

Individuals with an internal locus of control believe that occurrences in their lives stem from their actions. Therefore, they tend to invest a lot of energy into their goals, with the belief that they will receive returns on their investments (e.g., Caliendo et al., 2015; Cobb-Clark et al., 2014; Coleman and DeLeire, 2003; McGee, 2015; McGee and McGee, 2016). Consequently, empirical findings show that internals earn higher earnings (Heineck and Anger, 2010; Piatek and Pinger, 2016; Semykina and Linz, 2007), have a faster earning growth (Schnitzlein and Stephani, 2016) and more remarkable advancements in annual earnings (Andrisani and Nestel, 1976), and are even more likely to self-select into jobs with performance appraisals (Heywood et al., 2017) compared with individuals with an external locus of control. Furthermore, empirical evidence indicates that, as individuals with an internal locus of control believe that their actions can influence future outcomes (e.g., Lekfuangfu et al., 2017; Salamanca et al., 2016), they perform better in their jobs (Anderson, 1977; Bhagat and Chassie, 1978; Judge and Bono, 2001; Spector, 1982) and are more career oriented (e.g., Ng et al., 2006; Spector, 1982; Wang et al., 2010), as well as proactive (Buddelmeyer and Powdthavee, 2016; Miller et al., 1982) than their external counterparts are. For several reasons, these aspects are more consistent with working in the private sector compared with the public sector: This sector enables individuals to negotiate their wages, and it provides more bonus payment systems as well as

performance appraisals. In contrast, the payment models in the German public sector are mainly regulated by collective agreements, which means that the employees receive a fixed remuneration (Luechinger et al., 2010a). Moreover, the private sector provides further extrinsic rewards like greater career options, many promotion opportunities - especially to high management positions - and more exit options because of the large number of firms compared with that in the public sector (e.g., Ghinetti, 2007; Rainey and Bozeman, 2000). Combining these arguments leads to the assumption that there should be a positive association between internal locus of control and private sector employment.

However, empirical evidence indicates that internal locus of control predicts public sector employment.⁵ This study contributes to the literature and argues that the combination of locus of control with specific motives (intrinsic versus extrinsic) relates to sector of employment.

According to Frey and Osterloh (2002), the concept of intrinsic motivation refers to an (job) activity that is valuable in its own right, while extrinsic motivation stems from the desire to satisfy needs that are not directly related to the performed (job) activity, such as earnings, promotion, status, or prestige.⁶ Thus, intrinsic rewards can be derived from the satisfaction that an employee receives from performing a task (e.g., feeling of self-worth, sense of accomplishment), whereas extrinsic rewards are offered to employees by their employers (e.g., pay, benefits, promotion, etc.) (Houston, 2006; Steijn, 2008).

A positive relationship between intrinsic motivation and public sector employment holds for survey measures of intrinsic motivation, such as ‘serving the community’ or ‘altruism’ and ‘civic engagement’ (e.g., Brewer, 2003; Brewer et al., 2000; Crewson, 1997; Frank and Lewis, 2004; Houston, 2000; Lewis and Frank, 2002; Naff and Crum, 1999), as well as for behavior

⁵ In their paper, Ayaita et al. (2018) controlled for locus of control in a robustness check and ascertained a weak significant positive effect for locus of control and public sector employment.

⁶ According to Deci (1971, p. 105, cited by Frey, 1997), “one is said to be intrinsically motivated to perform an activity when one receives no apparent reward except the activity itself.”

like ‘donation of blood or money’ or ‘volunteer work’ (e.g., Buurman et al., 2012; Houston, 2006). Likewise, these studies demonstrated that extrinsic motivation, such as a ‘high income’ or ‘advancement opportunities,’ is related to private sector employment.

While these studies did not estimate whether the association between motives and the employment sector is due to selection, there is research pointing to selection effects of this sort. These studies find a positive relationship between intrinsic versus extrinsic motivation and sorting into the public versus private sector: Christensen and Wright (2011) collected survey data from students in their first year of law school, finding that respondents exhibiting more public service motivation (PSM)⁷ were more likely to work in public service. Equally, using a sample of graduate students, Vandenabeele (2008) showed that PSM positively predicts the preference for prospective public employers. By using data from the American Bar Association, Wright and Christensen (2010) determined that a greater proportion of lawyers who reported attraction to the legal field to serve the public sort themselves into the public sector. The studies of Carpenter et al. (2012), Clerkin and Cogburn (2012), and Holt (2018) also used samples of students and showed a significant correlation between PSM and attraction to public sector organizations before entry into the labor market. Using the SOEP or experimental data, the studies of Dur and Zoutenbier (2015) and Tepe and Vanhuysse (2017) demonstrated that individuals who score highly in altruism or civic virtue (Ayaita et al., 2018) self-select to the public sector. Using the British Household Panel Survey (BHPS), Gregg et al. (2011) analyzed donated labor (unpaid overtime) in caring industries and found that employees with a high PSM were more likely to move to firms in the public sector. Finally, using the same dataset (BHPS),

⁷ PSM can be defined as “an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations” (Perry and Wise, 1990, p. 368). Furthermore, it is also linked to intrinsic motivation, such as altruism and civic engagement (Lyons et al., 2006), and it is described as a “general, altruistic motivation to serve the interests of a community of people, a state, a nation or humankind” (Rainey and Steinbauer, 1999, p. 20).

Georgellis et al. (2011) found that intrinsically motivated individuals with prosocial or altruistic behaviors are attracted to the public sector.

In this study, the following aspects of intrinsic and extrinsic motivation are considered: the *importance of altruism* and *importance of civic engagement* as intrinsic motivation on the one hand, and the *importance of money* and *importance of career* as extrinsic motivation on the other. I select these motives because they are established measures of intrinsic versus extrinsic motivation (see, e.g., Ayaita et al., 2018; Crewson, 1997; Dur and Zoutenbier, 2014, 2015; Frank and Lewis, 2004; Georgellis et al., 2011; Houston, 2000, 2006; Luechinger et al., 2010b).

Building on the studies mentioned above, I hypothesize that not only intrinsic motives lead to sorting patterns in public sector employment and vice versa, but also the combination of motives and locus of control lead to sorting patterns.

The existing literature determined that the formation of locus of control as a personality trait happens early in life, during childhood, and remains relatively stable over time, especially during working age (Cobb-Clark and Schurer, 2013; Kulas, 1996; Sherman, 1984). This is an essential finding, because it is at the working age that individuals have to make important economic decisions, and locus of control affects these decisions (Caliendo et al., 2015; Cobb-Clark et al., 2014; Coleman and DeLeire, 2003; McGee, 2015; McGee and McGee, 2016).

As soon as individuals enter into working age, they must make the economic decision on the labor sector (public versus private) in which they want to be employed. I argue that individuals with an internal locus of control strategically decide to be employed in a specific labor sector for several reasons: First, they want to have control over their lives (e.g., Cobb-Clark, 2015; Mitchell et al., 1975; Ng et al., 2006; Rotter, 1966) and believe outcomes depend primarily on their actions and efforts (e.g., Krause, 2013; Malik et al., 2015; Mendolia and Walker, 2014). Second, they attribute their successes and failures to their capabilities (Malik et al., 2015) and seek situations that will supply them with positive feedback (Judge et al., 1998). Furthermore,

individuals with an internal locus of control believe in the returns on their investments. Thus, several studies have shown that internals compared with externals invest more in their health (Cobb-Clark et al., 2014; Mendolia and Walker, 2014), education (Coleman and DeLeire, 2003), job searching (Caliendo et al., 2015; McGee, 2015; McGee and McGee, 2016), and an active parenting style (Lekfuangfu et al., 2017), as well as risky assets (Buddelmeyer and Powdthavee, 2016; Salamanca et al., 2016).

According to the aspects and findings delineated above, I assume that individuals with an internal locus of control make conscious decisions in their lives related to sector selection. In contrast, individuals with an external locus of control believe that life outcomes are outside their personal control, and thus, they are matters of chance, luck, and fate or depend on powerful others (e.g., Ng et al., 2006; Stiglbauer, 2017; Verme, 2009). Consequently, I argue that they make less goal-directed decisions with respect to sector selection.

The present study contends that whether individuals with a higher locus of control strategically self-select into the public or private sector depends on motives. Thus, motives have been found to have a strong connection to personality, as motives influence the relationship between personality and several labor market outcomes (e.g., Barrick and Ryan, 2003; Gellatly, 1996; Johnson, 2003). Hence, I assume that individuals with an internal locus of control and strong intrinsic motivation will seek jobs in the public sector where they can proactively determine their outcomes by realizing or following a self-concept; the job activities in this sector allow this possibility more than the job activities of the private sector do (e.g., Francois, 2000; Perry et al., 2010). Thus, individuals with an internal locus of control and intrinsic motives believe that, in the public sector, their commitment will be rewarded in the form of intrinsic rewards (e.g., feeling of self-worth, sense of accomplishment, etc.). Likewise, I assume that internal locus of control in combination with extrinsic motives will lead to self-selection into the private sector, where individuals can proactively determine their outcomes by pursuing

a utility concept; this is because, compared with the public sector, the private sector provides them many extrinsic rewards like more career options; promotion opportunities, especially to high management positions; more exit options because of the large number of firms; bonus payment systems; and performance appraisals. Consequently, individuals with an internal locus of control - compared with their external counterparts - will seek a sector that will supply them with positive feedback (Judge et al., 1998), where they can find returns on their investments (e.g., Caliendo et al., 2015; Cobb-Clark et al., 2014; Coleman and DeLeire, 2003). As mentioned above, these returns can be realized intrinsically in the public sector or extrinsically in the private sector.

Based on these theoretical considerations and empirical findings, I deduce the following hypotheses:

Hypothesis 1: Higher intrinsic motivation will moderate the relationship between higher (internal) locus of control and sorting of individuals into the public sector.

Hypothesis 2: Higher extrinsic motivation will moderate the relationship between higher (internal) locus of control and sorting of individuals into the private sector.

3. Data

3.1. Survey and sample

The empirical analysis is based on the German Socio-Economic Panel (SOEP). This is a household panel survey that started in 1984, and it is known as a representative dataset of the population in Germany (Wagner et al., 2007). Every year, around 30,000 respondents in nearly 11,000 households are interviewed about topics like occupational biographies, employment, earnings, personality, satisfaction, and health.

This dataset is well suited for my analysis purposes because it contains information about several personality constructs (e.g., locus of control, the Big Five, reciprocity, etc.) and motives (e.g., intrinsic vs. extrinsic), as well as detailed information concerning the labor market (labor market sectors, sector switchers, work experience, all occupations according to the International Standard Classification of Occupations [ISCO-88], etc.).

The SOEP has already been used for analyses concerning scientific issues on locus of control or motives (e.g., Ayaita et al., 2018; Dohmen and Falk, 2010; Dur and Zoutenbier, 2015; Heineck and Anger, 2010; Heywood et al., 2017; Schurer, 2017). According to these studies, and to ensure a relatively homogenous sample, I carry out the following restrictions: I only include individuals who work either full- or part-time and have completed at least an upper secondary school degree or vocational degree. Upon completion of these restrictions, the final sample comprises 66,291 observations of 13,047 individuals. This study is based on the years 2005-2016 because the systematic consideration of personality traits in the SOEP starts in 2005.

To analyze selection patterns, I build an additional panel via the SOEP where I consider individuals in the year before their first labor market entry. Thus, I compare those who enter the public sector in the next year with those who enter the private sector in the next year. This sample consists of 782 observations, where each individual is observed only once. Here, I only consider individuals who have no full-time work experience and are not regularly employed, yet, have the following characteristics: They are regularly employed and not self-employed in the next year, hold an upper secondary school degree or vocational degree by the next year, and are not in a training status or unemployment program in the next year. The aims of using this framework is ensuring that personality (locus of control) and motives are not affected by job-market experiences.

A second selection analysis is used where I consider selection during the career by examining how the combination of motives and locus of control predicts sector changes in the next year. By doing this, I want to observe individuals who possibly feel that they have self-selected into

the wrong sector or do not feel satisfied in the current sector, and therefore, change sectors. In accordance with this aspect, the existing literature shows that individuals with an internal locus of control prefer to leave the job when they feel that the job is dissatisfying them (Ng et al., 2006; Spector, 1982). However, the present data do not allow identification of the real reason for the sector changes.

I find 1,022 changes from the private to public sector and 1,058 changes from the public to private sector. Using these selection analyses, I follow the study of Ayaita et al. (2018).

3.2 Measures considered in the main analysis

The dependent variable *Public sector* describes whether an individual is employed in the public or private sector. This dummy variable takes a value of 1 if the individual is employed in the public sector and 0 if the individual is employed in the private sector. The item is formulated as follows: ‘Does the organization in which you are working belong to the public sector?’⁸

The main explanatory variable *Locus of control* consists of nine items, which are based on Rotter's (1966) scale. These variables are originally scored on a 7-point Likert scale ranging from 1 ‘disagree completely’ to 7 ‘agree completely’. Table A1 in the Appendix depicts the operationalization of these items. Higher values of items 1-3 reflect a more internal locus of control, while higher values of items 4-9 depict a more external locus of control. Based on the literature (Caliendo et al., 2015; Heineck and Anger, 2010; Heywood et al., 2017), I construct an overall index of locus of control. To accomplish this, I initially recode items 4-9 in inverse order and then add up all nine items. Finally, I divide the sum by 9. Thus, the overall index ranges from 1 to 7, where higher values reflect a more internal locus of control. A factor analysis is not computed because the respective items in the SOEP are established measures of the Rotter

⁸ This paper presents the formulations from the German version of the SOEP. Therefore, I have translated all the item formulations into English. The versions are available at DIW Berlin/SOEP (2018).

(1966) scale. Furthermore, the internal consistency of locus of control is audited and amounts to $\alpha = 0.67$.

Further explanatory variables capture aspects of intrinsic motives on the one hand and extrinsic motives on the other. I approximate intrinsic motives with two measures: My first variable reads as follows: *Importance of civic engagement*, which captures how important it is for the respondent to be politically and/or societally committed (see, e.g., Ayaita et al., 2018; Luechinger et al., 2010b). The second variable, *Importance of altruism*, describes how important it is for the individual to be there for others (see, e.g., Ayaita et al., 2018; Becker et al., 2012; Dur and Zoutenbier, 2014, 2015). Other explanatory variables that present extrinsic motives are also covered by two measures. First, *Importance of money* captures how important it is for the individuals to be able to afford things for themselves (Ayaita et al., 2018). Second, I use the variable *Importance of career* (Luechinger et al., 2010b) that describes how important it is for the respondents to be successful in their careers. All the measures for intrinsic and extrinsic motives are originally scored on a Likert scale from 1 to 4, ranging from ‘Very important’ to ‘Not at all important’. For the analysis, I use the inverse of each variable so that higher values correspond to higher intrinsic versus extrinsic motivation. Moreover, I z-standardize each explanatory variable for my analysis purposes (mean = 0 and standard deviation = 1).

For an overview of the dependent and independent variables, see Table A1 in the Appendix.

I use a large number of control variables to hold factors constant that could otherwise bias the results because they may be coherent with both the explanatory variables and dependent variable. The selection of the control variables is quite similar to the choices made in the studies of Ayaita et al. (2018), Heywood et al. (2017), and Dohmen and Falk (2010), who use the SOEP to study scientific issues on either different personality constructs, such as locus of control, or motives.

The control variables are established as follows: First, I consider socio-demographic factors and information on education and work experience. Second, I control for risk aversion because many studies have determined that risk aversion positively predicts public sector employment (Ayaita et al., 2018; Bellante and Link, 1981; Dohmen and Falk, 2010; Dur and Zoutenbier, 2015; Pfeifer, 2011; Roszkowski and Grable, 2009). Furthermore, I include a certain number of personality traits: First, the Big Five personality traits of conscientiousness, openness, extraversion, agreeableness, and neuroticism are included. In addition, I control for specific personality traits, such as trust, positive reciprocity, and negative reciprocity. By using such personality traits, I largely follow the study by Heywood et al. (2017), which examined whether locus of control predicts sorting patterns into jobs with performance appraisals.

For a full overview of the control variables, see Table A1 in the Appendix.

3.3 Measures considered in the robustness checks

For the robustness check, I consider revealed preferences as alternative measures for the items that represent intrinsic versus extrinsic motives in this study. Thus, the combination of my explanatory variables reflects subjective assessments of motives for respondents' stated preferences. Stated preferences data have the disadvantage that they "may be vulnerable to self-stereotyping, self-serving biases, lack of attention by respondents, and strategic motives" (Buurman et al., 2012, p. 281). In contrast, revealed preferences represent objective measures of motives because the respondents have to reveal their actual behavior. Several studies have used revealed preferences to study the effects of these measures on public sector employment (see, e.g., Ayaita et al., 2018; Buurman et al., 2012; Gregg et al., 2011; Houston, 2006; Lee, 2012; Rotolo and Wilson, 2006; Tonin and Vlassopoulos, 2015).

This study uses the following revealed preferences: First, I focus on *Voluntary activities*, which measures how often the respondent is engaged in 'Voluntary activities in associations or social services'. Then, I consider the variable *Helping behavior*, which measures the frequency

of ‘Helping out friends, relatives, or neighbors’. I use these revealed preferences to approximate intrinsic motives. Finally, I use the actual behavior *Unpaid overtime* as a measure of extrinsic motivation. Thus, in contrast to Gregg et al. (2011), I argue that many employees engage in unpaid overtime because they believe that it will improve their promotion prospects and result in higher remuneration in the future (Dewatripont et al., 1999). *Unpaid overtime* captures how many hours of unpaid overtime the individual has performed in the last month. It is computed as the difference of reported total overtime and reported paid overtime.

All of the revealed preferences measures are - after recoding - scaled from 1 (‘Never’) to 4 (‘At least once a week’) (except of *Unpaid overtime*) and z-standardized for the analysis.

In a second robustness check, I analyze whether there is a difference between the interaction of personality and motives on public versus private sector employment by the gender of the respondents. I consider the variable *Gender* because existing literature has determined that there are important gender differences concerning locus of control and labor market outcomes (see, e.g., Andrisani, 1977; Cobb-Clark and Tan, 2011; Goldsmith et al., 1996; Hansemark, 2003; Semykina and Linz, 2007).

Furthermore, the existing literature shows that locus of control can differ between migrants and non-migrants (Kirkcaldy et al., 2007; Magwaza and Bhana, 1991). Thus, another robustness check investigates whether there is a different relationship between the combination of locus of control and motives on public versus private sector employment according to the individuals’ migration versus non-migration background. The SOEP comprises migrants from diverse countries, such as Turkey, Spain, Italy, and all other European countries. The respondents can state whether they have a direct or indirect migration background. I treat both options as equal and consider them as migrants in the analysis.

To consider whether the results also hold for broadly defined occupational groups in the public versus private sector, I consider the following robustness check: I investigate the most important professional groups according to ISCO-88 separately. Here, I consider *Managers* and

Professionals as one group. Then, I build a second group that includes *Technicians and associated professionals, clerks, and service, shop, and market sales workers*. Finally, the last group contains all *Other* occupations concerning the remaining ISCO-88 categories. Especially, the first group of job types requires a high (internal) locus of control, whereas employees of the second and third groups are expected to exhibit a low (external) locus of control (e.g., Anderson, 1977; Caliendo et al., 2014; Cobb-Clark and Tan, 2011; Coleman and DeLeire, 2003; Hansemark, 2003; Mitchell et al., 1975). Therefore, it can be expected that *Managers* and *Professionals* with a high locus of control and intrinsic motives would rather be employed in the public sector, whereas *Managers* and *Professionals* with a high locus of control and extrinsic motives will prefer to be employed in the private sector. Using these occupational groups, I follow the study of Tonin and Vlassopoulos (2015), which examines whether public and private sector employees differ concerning their public service motivation using the data from the Survey of Health, Ageing and Retirement in Europe (SHARE).

A full overview of the variables used in the robustness checks is represented in Table A1 in the Appendix.

3.4 Descriptive statistics

Table 1 demonstrates the descriptive statistics and pairwise correlations. It can be observed that 31% of the respondents are employed in the public sector. Locus of control and the intrinsic motives are each highly positively correlated with public sector employment, whereas the extrinsic motives, as expected, are highly negatively correlated with public sector employment. The moderator variables are also positively correlated with locus of control. All the correlations are rather small, meaning that there are no multicollinearity problems with the moderator variables and the main explanatory variable. There is only a moderate correlation between *Importance of money* and *Importance of career* (.27), meaning that those respondents who think money is important are more likely to attach a high value to the importance of career. The

summary statistics of all the variables used in the regressions are displayed in Table A2 in the Appendix.

Table 1: Descriptive statistics and bivariate correlations of main variables

Variables	<i>M</i>	<i>SD</i>	Public sector	Locus of control	Imp. civic engagement	Imp. altruism	Imp. money
1 Public sector	0.31	0.46					
2 Locus of control	0	1	.02***				
<u>Intrinsic motives</u>							
3 Imp. civic engagement	0	1	.15***	.07***			
4 Imp. altruism	0	1	.04***	.06***	.15***		
<u>Extrinsic motives</u>							
5 Imp. money	0	1	-.06***	.00	-.07***	.10***	
6 Imp. career	0	1	-.04***	.08***	.10***	.11***	.27***

Note: This table reports the means and standard deviations of the dependent variable (public sector employment) and main explanatory variables, as well as the correlations between them. All main explanatory variables are z-standardized. *Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

4. Econometric framework

In the main specification, I regress public sector employment on locus of control, different motives, and the interaction of the two, as well as on the wide range of control variables. First, I address whether motives moderate the relationship between locus of control and public versus private sector employment by considering the whole sample. Second, to test the hypotheses, I consider the selection samples. For the main and selection samples, I run ordinary least squares (OLS) estimates.⁹ The equation is as follows:

⁹ As the dependent variable is dichotomous, one may also use a probit or logit model. However, existing literature has shown that “the magnitude of the interaction effect in nonlinear models does not equal the marginal effect of the interaction term” (Ai and Norton, 2003, p. 123). Furthermore, Angrist and Pischke (2009) argued that the interpretation of the regression results is easier in ordinary least squares (OLS) regressions.

$$\begin{aligned}
Public_{it} = & \alpha + b_1 * loc_{it} + b_2 * ImpCivic_{it} + b_3 * ImpAltruism_{it} + b_4 * ImpMoney_{it} \\
& + b_5 * ImpCareer_{it} + b_6 loc_{it} * ImpCivic_{it} + b_7 loc_{it} * ImpAltruism_{it} \\
& + b_8 loc_{it} * ImpMoney_{it} + b_9 loc_{it} * ImpCareer_{it} + \overline{S}_{it} b_{10} + \overline{P}_{it} b_{11} \\
& + \overline{R}_{it} b_{12} + \overline{J}_t b_{13} + \varepsilon_i
\end{aligned}$$

where, for example, α denotes the intercept, $b_6 loc_{it} * ImpCivic_{it}$ depicts the interaction of locus of control and importance of civic engagement, and so forth. In addition, $\overline{S}_{it}$ denotes a vector containing the control variables, with information about socio-demographic factors, work experience, and risk aversion. $\overline{P}_{it}$ is a vector that comprises the Big Five personality traits and further specific traits, such as trust and reciprocity. The vector $\overline{R}_{it}$ represents dummies for the state of residence (one variable for each German state, with Schleswig-Holstein as the baseline category), $\overline{J}_t$ comprises year dummies (one variable for each year from 2005 to 2015; 2016 is used as the baseline year), and ε_i represents the error term.

To guarantee that standard errors are not underestimated, I use heteroskedasticity-robust standard errors because the assumption of homoskedasticity is rejected with a Breusch-Pagan / Cook-Weisberg test ($p < .01$). Since the same individual is observed over several years, I cluster the standard errors at the individual level.

To test my hypotheses, I implement two techniques where I consider selection patterns. In the first estimation, I consider individuals in the year before they enter the job market the first time, and compare those who enter the public sector in the next year with those who enter the private sector in the next year. Here, the binary dependent variable is public sector employment in the next year. In a second analysis, I consider selection patterns during the career by investigating whether motives moderate the relationship between locus of control and sector changes in the next year relative to staying in the current sector. By doing this, I guarantee that the employees' personality (locus of control) and motives cannot be influenced by the new sector, and thus, only selection is captured and not socialization effects. Here, the binary

dependent variable captures the change from the private to public sector in the next year and vice versa.

Concerning the variables that capture several motives and personality, it must be mentioned that they are only available in different years in the SOEP dataset (e.g., locus of control and reciprocity in 2005, 2010, and 2015; intrinsic and extrinsic motives in 2004, 2008, 2012, and 2016; Big Five personality traits in 2005, 2009, 2013; and trust in 2003, 2008, and 2013). Therefore, I also extrapolate this information from a specific year for the next years, that is, until the year in which the variable is collected again in the SOEP. This implementation is used because several studies have shown that motives and personality are relatively stable over several years (e.g., Ayaita et al., 2018; Carlsson et al., 2014; Judge et al., 2004; Volk et al., 2012). Since I especially consider individuals during their working age, it should be mentioned that locus of control has been found to be most stable among working-age individuals (Cobb-Clark and Schurer, 2013; Kulas, 1996; Sherman, 1984). I do not consider personality traits and motives from the future perspective; thus, I want to avoid reverse causality because personality can be influenced by later job experiences. Therefore, I investigate how public versus private sector employment is associated with certain motives and personality traits 1-5 years before the observed employment.

5. Results

5.1 Locus of control, motives, and public versus private sector employment

Table 2 displays how the combination of locus of control and intrinsic motives (measured by importance of civic engagement and altruism), as well as extrinsic motives (measured by importance of money and career), is related to public versus private sector employment. Here, I first consider the whole sample (by adding all the control variables into the estimates) to

determine whether there is a correlation between the interaction of locus of control and motives on public versus private sector employment.

As the table shows, locus of control persistently (Models 1 – 4) exhibits no significant association with public versus private sector employment¹⁰ when the other explanatory variables are set to their mean value.¹¹

By considering the interaction terms, it can be noticed that intrinsic motives (importance of civic engagement—the motive to be engaged in political or societal matters) moderate the association between locus of control and public sector employment. Especially, an increase in importance of civic engagement by 1 standard deviation, increases the association of locus of control with public sector employment by 0.8 percentage points (pp) on average when all the other factors are held constant (Model 1).

In contrast, an increase in importance of career by 1 standard deviation, increases the association of locus of control with private sector employment by 0.6 pp on average. Already, for the whole sample, where one can only consider whether there is a relationship between the combination of locus of control, motives, and public versus private sector employment (without selection effects), support for the first and second hypotheses of this study is evident, even if the associations are relatively small (0.8 pp and 0.6 pp). Thus, as expected in the theoretical considerations, motives at least moderate the association of locus of control with public versus private sector employment.

¹⁰ Ayaita et al. (2018) controlled for locus of control and determined a weakly significant and positive effect for locus of control and public sector employment. Yet, in their study, locus of control was constructed as a factor score of the nine respective items instead of an average score. Because the items for locus of control in the SOEP use the Rotter scale (1966), which is an established measure for locus of control, it is not relevant to compute a factor analysis (Heywood et al., 2017).

¹¹ Remember that all explanatory variables are z-standardized.

Table 2: Locus of control, motives, and public versus private sector employment

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.004 (0.004)	0.011 (0.018)	-0.001 (0.001)	-0.002 (0.002)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.048*** (0.004)	0.033* (0.018)	0.004*** (0.001)	-0.004** (0.002)
Imp. altruism	0.008** (0.004)	0.019 (0.017)	0.000 (0.001)	-0.001 (0.002)
<u>Extrinsic motives</u>				
Imp. money	-0.007* (0.004)	-0.006 (0.017)	-0.002** (0.001)	-0.001 (0.002)
Imp. career	-0.015*** (0.004)	-0.032* (0.017)	0.000 (0.001)	0.005** (0.002)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.008** (0.003)	0.027* (0.016)	-0.000 (0.001)	-0.002 (0.002)
Imp. altruism x loc	-0.002 (0.003)	-0.017 (0.015)	-0.000 (0.001)	-0.000 (0.002)
Imp. money x loc	-0.000 (0.003)	-0.013 (0.015)	-0.001 (0.001)	-0.003 (0.002)
Imp. career x loc	-0.006** (0.003)	-0.035** (0.014)	0.000 (0.001)	0.004*** (0.002)
Constant	0.084* (0.046)	0.382** (0.165)	-0.002 (0.009)	0.057** (0.026)
Observations	66,291	782	45,846	20,445
R-squared	0.092	0.116	0.015	0.040

Note: Models (1-4) depict ordinary least squares (OLS) regressions. In Model (1) the binary dependent variable is public sector employment, and in Model (2), the dependent variable is public sector employment in the next year; this model observes individuals in the year before they enter the job market the first time and compares those who enter the public sector in the next year with those who enter the private sector in the next year. In Models (3) and (4), the dependent variables depict sector changes (from the private to the public sector and vice versa) relative to staying in the respective sector. In all the models, the main explanatory variables are standardized variables on locus of control, importance of civic engagement, altruism, money, and career. All regressions include control variables on bio/educ./exp. (age, gender, marital status, German, migration background, college degree, experience in full-time jobs, and experience in part-time jobs), risk aversion, the Big Five personality traits, trust, positive reciprocity, negative reciprocity, region, and year dummies. Among the control variables, experience is dropped from Model (2) because these individuals enter the labor market for the first time. Robust standard errors in parenthesis, clustered at the individual level in Models (1), (3), and (4). * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

To test the hypotheses, which comprise whether motives moderate the relationship between internal locus of control and sorting into the public versus private sector, in the next step, I first consider graduates who enter the labor market for the first time. Thus, the motives and personality (locus of control) of the individuals are observed in the year before the labor market is first entered to guarantee that these (motives and personality) are not biased by the job market. Interestingly, most of the results (Model 1) are already apparent and significant in the year prior to initial employment (Model 2). By considering the interaction terms, and thus, testing the hypotheses, it is clear that motives still moderate the association between locus of control and public versus private sector employment. Especially, an increase in importance of civic engagement by 1 standard deviation, increases the relationship of locus of control with entering the public sector by 2.7 pp on average when all other factors are held constant. The coefficient is larger than that for the whole sample, but it is only weakly significant. The overall probability of entering the public sector in the next year is 27.1 %; the increase by 2.7 pp corresponds to an increase by 10%. Thus, this finding supports Hypothesis 1 with respect to some but not all aspects (importance of altruism and locus of control) of actual behavior. Equally, it is apparent that an increase in importance of career by 1 standard deviation, increases the association of locus of control with entering the private sector by 3.5 pp on average. This coefficient is larger than that for the whole sample. Considering that the overall probability of entering the private sector in the next year is 72.9%, the increase by 3.5 pp corresponds to an increase by 5%. This result (especially the importance of career) supports Hypothesis 2. Overall, Model 2 demonstrates that selection drives the positive relationship between the combination of locus of control, motives, and public versus private sector employment.

In Models 3 and 4, I consider selection during the career by examining whether motives moderate the relationship between locus of control and sector changes in the next year. Concerning the interaction variables, it is apparent that motives do not significantly moderate the relationship between locus of control and job changes from the private to public sector in

the next year (Model 3). In contrast, the combination of extrinsic motives (importance of career) and locus of control results in changes from the public to private sector in comparison with staying in the public sector (Model 4). This could mean that persons who score high in locus of control and the importance of career possibly sorted themselves into the wrong sector, and therefore, changed sector afterward. Thus, an increase in importance of career by 1 standard deviation, increases the relationship of locus of control and changing into the private sector in the next year by 0.4 pp on average (Model 4). The baseline share of such changes is 5.2%. Thus, the increase by 0.4 pp corresponds to an increase by 7.7%. This result is rather small (0.4 pp), but it also supports Hypothesis 2.

Table A3 in the Appendix reports the results (Models 1-4) for the control variables.

5.2 Robustness checks

To shed further light on the results, I investigate several robustness checks. Based on the main results, the first robustness check considers revealed instead of stated preferences, as delineated in Table 2. As shown in Table 3, the results are quite similar to the main results. It is remarkable that locus of control persistently (Models 1–4) exhibits no significant association with public versus private sector employment when the other explanatory variables are set to their mean value.

By considering the variables of interest, it can be noted that the results are robust. Consequently, it is visible that revealed preferences moderate the association of locus of control with public versus private sector employment. Especially, an increase in voluntary activities by 1 standard deviation, increases the association of locus of control with public sector employment by 0.7 pp on average when all other factors are held constant (Model 1). In contrast, an increase in unpaid overtime by 1 standard deviation, increases the association of locus of control with private sector employment by 0.8 pp on average.

Concerning the selection sample (Model 2), it can be observed that an increase in voluntary activities by 1 standard deviation, increases the relationship of locus of control and public sector employment in the next year by 4.3 pp on average. This estimated coefficient is significant and larger (4.3 pp vs. 0.7 pp) than the coefficient where I only consider whether there is a connection between revealed preferences and locus of control on public versus private sector employment (Model 1). Thus, this finding is also robust. In this sorting model, unpaid overtime cannot be measured because this sample observes graduates before they enter the job market the first time.

Considering selection patterns during the career (Models 3 and 4), the results are not robust in terms of the interaction between motives and locus of control. This is not surprising because, in the main results (Table 2, Model 4), only extrinsic motives (importance of career) moderate the relationship between locus of control and changes from the public to private sector in comparison with staying in the public sector. Nevertheless, it is striking that employees who are 1 standard deviation more often engaged as volunteers in clubs or social services have, on average, a 0.3 pp higher probability of changing from the private to public sector in the next year when the other explanatory variables are set to their mean value (Model 3). This result also holds for employees who reveal helping behavior, but the estimated coefficient is relatively small and only weakly significant (0.1 pp, $p < .10$). Likewise, it is also visible in Model 4 that donated labor (measured as unpaid overtime) positively predicts changes from the public to private sector in comparison with staying in the public sector (0.5 pp). Thus, relating this association to the baseline share of such changes (5.2%), the association amounts to 10%.

The results of the control variables are displayed in Table A4 in the Appendix.

Table 3: Robustness check: revealed preferences and public versus private sector employment

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.005 (0.004)	0.019 (0.018)	-0.001 (0.001)	-0.002 (0.002)
<u>Revealed preferences</u>				
<u>Intrinsic motives</u>				
Voluntary activities	0.036*** (0.004)	0.042** (0.018)	0.003*** (0.001)	-0.002 (0.002)
Helping behavior	0.003 (0.004)	0.020 (0.017)	0.001* (0.001)	-0.001 (0.002)
<u>Extrinsic motives</u>				
Unpaid overtime	-0.019*** (0.003)	-	-0.000 (0.001)	0.005** (0.002)
<u>Interaction terms</u>				
Voluntary act. x loc	0.007* (0.004)	0.043** (0.017)	-0.000 (0.001)	0.001 (0.002)
Helping beh. x loc	-0.002 (0.003)	-0.017 (0.015)	-0.000 (0.001)	-0.000 (0.002)
Unpaid over. x loc	-0.008*** (0.003)	-	-0.000 (0.001)	0.002 (0.002)
Constant	0.063 (0.046)	0.349** (0.161)	-0.002 (0.009)	0.061** (0.026)
Observations	64,221	774	44,484	19,737
R-squared	0.091	0.107	0.015	0.040

Note: For detailed description, see Table 2. In all models, the main explanatory variables are standardized variables on locus of control, voluntary activities, helping behavior, and unpaid overtime (except in Model 2). All control variables are included. Robust standard errors in parenthesis, clustered at the individual level in Models (1), (3), and (4). * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

In a second robustness check, I analyze whether there is a difference between the interaction of personality and motives on public versus private sector employment by the gender of the

respondents. For women (Table 4a), none of the interaction terms are significant (Models 1-4). This is surprising, but the study of Reitz and Jewell (1979) also found a stronger relation between job involvement and internal locus of control for men than women.

Table 4a: Robustness check: female and public versus private sector employment

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.005 (0.006)	-0.029 (0.027)	-0.002 (0.002)	-0.005* (0.003)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.044*** (0.006)	-0.014 (0.028)	0.004*** (0.001)	-0.003 (0.003)
Imp. altruism	0.008 (0.005)	0.022 (0.026)	-0.001 (0.001)	-0.002 (0.002)
<u>Extrinsic motives</u>				
Imp. money	-0.009 (0.006)	0.012 (0.027)	-0.003** (0.001)	-0.002 (0.003)
Imp. career	-0.003 (0.006)	-0.018 (0.027)	0.002 (0.001)	0.007*** (0.002)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.005 (0.005)	0.022 (0.025)	-0.001 (0.001)	0.002 (0.003)
Imp. altruism x loc	-0.005 (0.005)	-0.008 (0.023)	-0.000 (0.001)	0.000 (0.002)
Imp. money x loc	0.005 (0.005)	0.019 (0.024)	-0.001 (0.001)	-0.005 (0.003)
Imp. career x loc	-0.006 (0.005)	-0.032 (0.022)	-0.000 (0.001)	0.002 (0.002)
Constant	0.048 (0.065)	0.627*** (0.232)	-0.004 (0.015)	0.085** (0.036)
Observations	31,321	421	19,790	11,531
R-squared	0.090	0.123	0.018	0.047

Note: For detailed description, see Table 2. All control variables are included. Robust standard errors in parenthesis, clustered at the individual level in Models (1), (3), and (4). * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

For men (Table 4b), the results partly hold for the whole sample: An increase in importance of civic engagement by 1 standard deviation, increases the association of locus of control with public sector employment by 1.1 pp on average when all other factors are held constant. The estimated coefficient is slightly larger than that for the main sample in Table 2 (0.8 pp vs. 1.1 pp), whereas this effect disappears in the selection sample (Model 2).

In this selection sample, interesting results emerge: Men with extrinsic motives (importance of money and career) and a high locus of control self-select into the private sector after graduating. Concretely, an increase in importance of money by 1 standard deviation, increases the association of locus of control with entering the private sector after graduating by 4.7 pp on average. Relating this association to the baseline share of entering the public versus private sector in the next year for men (22.2%), the association amounts to 21.2%. The same occurs for importance of career, where the estimated relationship even amounts to 6.1 pp (or 27.5%), and this result is highly significant. This means that, for men with an internal locus of control and high extrinsic motives, the private sector is more attractive. These findings are well suited to explaining the results of the study by Andrisani (1977), who determined that men with an internal locus of control experience faster occupational advancement than men with an external locus of control do. The private sector enables the best possibilities for achieving occupational advancements.

Considering selection patterns during the career, the results hold for changes from the public to private sector (Model 4). For men, extrinsic motives (importance of career) moderate the association between internal locus of control and changes from the public sector to private sector in comparison with staying in the public sector (0.7 pp).

The results for the control variables are displayed in Table A5 in the Appendix.

Table 4b: Robustness check: male and public versus private sector employment

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.005 (0.006)	0.047* (0.025)	-0.001 (0.001)	0.003 (0.003)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.049*** (0.005)	0.055** (0.023)	0.003*** (0.001)	-0.004* (0.003)
Imp. altruism	0.010** (0.005)	0.028 (0.023)	0.001 (0.001)	0.001 (0.003)
<u>Extrinsic motives</u>				
Imp. money	-0.006 (0.005)	-0.008 (0.021)	-0.001 (0.001)	0.001 (0.003)
Imp. career	-0.024*** (0.005)	-0.036 (0.022)	-0.000 (0.001)	0.002 (0.003)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.011*** (0.004)	0.017 (0.021)	0.000 (0.001)	-0.005 (0.003)
Imp. altruism x loc	-0.002 (0.004)	-0.004 (0.020)	0.000 (0.001)	-0.000 (0.003)
Imp. money x loc	-0.005 (0.004)	-0.047** (0.020)	-0.001 (0.001)	-0.003 (0.003)
Imp. career x loc	-0.005 (0.004)	-0.061*** (0.018)	0.001 (0.001)	0.007*** (0.003)
Constant	0.159** (0.069)	0.122 (0.246)	0.003 (0.011)	0.007 (0.037)
Observations	34,970	361	26,056	8,914
R-squared	0.081	0.235	0.012	0.042

Note: For detailed description, see Table 2. All control variables are included. Robust standard errors in parenthesis, clustered at the individual level in Models (1), (3), and (4). * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

As a further robustness check, I analyze whether the main results (Table 2) are driven by migrants versus non-migrants. The results in Table 5a first display individuals without a migration background. It is visible that the results for respondents without a migration

background remain virtually unchanged (Table 2). An increase in the importance of civic engagement by 1 standard deviation, increases the association of locus of control with public sector employment by 1.0 pp on average. Yet, the estimated relationship is rather small but highly significant. Furthermore, an increase in importance of career by 1 standard deviation, increases the association of locus of control with private sector employment by 0.7 pp, which is also a small and rather weakly significant relationship.

Table 5a: Robustness check: no migration background and public versus private sector employment

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.007 (0.005)	0.017 (0.020)	-0.001 (0.001)	-0.001 (0.002)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.050*** (0.004)	0.043** (0.020)	0.003*** (0.001)	-0.004** (0.002)
Imp. altruism	0.008** (0.004)	0.025 (0.020)	0.000 (0.001)	-0.000 (0.002)
<u>Extrinsic motives</u>				
Imp. money	-0.006 (0.004)	-0.020 (0.018)	-0.003*** (0.001)	-0.002 (0.002)
Imp. career	-0.017*** (0.004)	-0.026 (0.020)	0.001 (0.001)	0.005*** (0.002)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.010*** (0.004)	0.034* (0.017)	0.001 (0.001)	-0.001 (0.002)
Imp. altruism x loc	-0.000 (0.003)	-0.013 (0.017)	0.000 (0.001)	-0.000 (0.002)
Imp. money x loc	-0.001 (0.003)	-0.008 (0.015)	-0.001 (0.001)	-0.002 (0.002)
Imp. career x loc	-0.007* (0.004)	-0.040** (0.017)	-0.000 (0.001)	0.004** (0.002)

Constant	0.155*** (0.044)	0.414** (0.162)	-0.009 (0.008)	0.030* (0.018)
Observations	56,609	641	38,458	18,151
R-squared	0.092	0.124	0.016	0.039

Note: For detailed description, see Table 2. All control variables are included. Robust standard errors in parenthesis, clustered at the individual level in Models (1), (3), and (4). * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

This pattern is also visible for graduates entering the labor market for the first time: The estimated coefficient for the interaction between importance of civic engagement and locus of control is larger than for the whole sample (3.4 pp vs. 1.0 pp) but only weakly significant. Likewise, the importance of career moderates the relationship between locus of control and sorting into the private sector after graduating. Here, the coefficient is also larger than that for the whole sample (-4.0 pp vs. -0.7 pp). Furthermore, I find robust results concerning selection patterns during the career: The interaction between importance of career and locus of control positively leads to changes from the public to the private sector (0.4 pp), like in the main results (Table 2, Model 4).

As determined in the existing locus of control literature (e.g., Kirkcaldy et al., 2007; Magwaza and Bhana, 1991), different results emerge for individuals with a migration background (Table 5b): The importance of altruism negatively moderates the association between locus of control and public sector employment (-1.4 pp). However, I find robust results in the selection sample. Thus, graduates with a migration background who place a high importance on money and show a high locus of control self-select into the private sector in the next year (8.6 pp). Considering that the overall probability of entering the public versus private sector in the next year for migrants is 17%, the increase by 8.6 pp corresponds to an increase by 50.6%. However, the estimated association only holds at a significance level of $p < .10$.

By considering selection patterns during the career, it is striking that the results remain virtually unchanged in relation to the main results (Table 2). For migrants, the importance of

career moderates the association between locus of control and changes from the public to private sector in comparison with staying in the public sector (1.2 pp or 17.2%).

The results for the control variables are displayed in Table A6 in the Appendix.

Table 5b: Robustness check: migration background and public versus private sector employment

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	-0.010 (0.009)	0.007 (0.052)	-0.003 (0.002)	-0.005 (0.007)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.033*** (0.008)	-0.097** (0.045)	0.007*** (0.003)	-0.003 (0.006)
Imp. altruism	0.006 (0.008)	-0.003 (0.034)	0.002 (0.002)	-0.002 (0.006)
<u>Extrinsic motives</u>				
Imp. money	-0.014* (0.008)	0.071 (0.045)	0.000 (0.002)	0.002 (0.007)
Imp. career	0.001 (0.008)	-0.045 (0.032)	-0.000 (0.002)	0.004 (0.007)
<u>Interaction terms</u>				
Imp. civic eng. x loc	-0.002 (0.006)	-0.066 (0.041)	-0.004 (0.002)	-0.003 (0.006)
Imp. altruism x loc	-0.014** (0.006)	-0.036 (0.033)	-0.002 (0.002)	-0.003 (0.006)
Imp. money x loc	0.002 (0.007)	-0.086* (0.048)	-0.001 (0.002)	-0.010 (0.006)
Imp. career x loc	-0.004 (0.007)	0.035 (0.041)	0.002 (0.002)	0.012** (0.006)
Constant	0.018 (0.108)	1.129*** (0.338)	0.022 (0.024)	0.046 (0.051)
Observations	9,682	141	7,388	2,294
R-squared	0.112	0.460	0.023	0.074

Note: For detailed description, see Table 2. All control variables are included. Robust standard errors in parenthesis, clustered at the individual level in Models (1), (3), and (4). * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

Another robustness check investigates whether the results are robust in terms of different occupations in the respective labor sector. Thereby, I only consider the whole sample because integrating the selection samples would lead to fewer observations. The idea of analyzing different occupations in the public versus private sectors stems from the warranted criticism that the consideration of the sector alone would be too general (e.g., Ayaita et al., 2018; Dur and van Lent, 2018; Kjeldsen and Jacobsen, 2013; Tonin and Vlassopoulos, 2015). Thus, for example, one could argue that some jobs in the public versus private sector require motives or internal locus of control more than other jobs would in the respective sectors. Therefore, I consider all occupation groups included in the International Standard Classification of Occupations (ISCO-88). In line with the research of Tonin and Vlassopoulos (2015), I distinguish the following occupations, which include a substantial number of both private and public sector positions: First, I look at managers and professionals (18,423 observations, of which 46% are employed in the public sector and 54% in the private sector); second, I consider technicians, clerks, and service and sales workers (32,114 observations, of which 31% are employed in the public sector and 69% in the private sector); and finally, I include all other occupations (15,245 observations, of which 12% are employed in the public sector and 88% in the private sector).

Table 6 presents the results of this robustness check.

By analyzing the variables of interest, it is visible that the results are robust for the interaction between intrinsic motives (importance of civic engagement), extrinsic motives (importance of career), and locus of control in the group of managers and professionals. Thus, an increase in importance of civic engagement by 1 standard deviation, increases the association of locus of control with public sector employment by 1.1 pp on average when all other factors are held constant.

Table 6: Robustness check: public sector employment in different occupations

Variables	(1) Managers & professionals	(2) Technicians, clerks, & service	(3) Other
Locus of control (loc)	-0.008 (0.008)	0.000 (0.006)	0.005 (0.006)
<u>Intrinsic motives</u>			
Imp. civic engagement	0.062*** (0.007)	0.034*** (0.005)	0.015*** (0.005)
Imp. altruism	0.009 (0.007)	0.007 (0.005)	0.007 (0.005)
<u>Extrinsic motives</u>			
Imp. money	-0.013* (0.007)	-0.001 (0.005)	-0.006 (0.005)
Imp. career	-0.022*** (0.008)	-0.017*** (0.005)	-0.018*** (0.005)
<u>Interaction terms</u>			
Imp. civic engagement x loc	0.011* (0.006)	0.006 (0.005)	0.004 (0.004)
Imp. altruism x loc	0.001 (0.006)	-0.004 (0.004)	-0.003 (0.003)
Imp. money x loc	0.006 (0.006)	-0.003 (0.004)	-0.000 (0.004)
Imp. career x loc	-0.017** (0.007)	-0.001 (0.005)	0.001 (0.004)
Constant	0.061 (0.103)	0.113* (0.063)	0.039 (0.067)
Observations	18,423	32,114	15,245
R-squared	0.154	0.030	0.045

Note: This table reports ordinary least squares (OLS) regressions (Models 1-3). In all models, the binary dependent variable is public sector employment. The main explanatory variables are standardized variables on locus of control, importance of civic engagement, altruism, money, and career. Model (1) is restricted to managers and professionals. Model (2) is restricted to technicians, clerks, service workers, and shop and market sales workers. Model (3) is restricted to employees working in all other jobs, which refer to the ISCO-88. All regressions include control variables on bio/educ./exp. (age, gender, marital status, German, migration background, college degree, experience in full-time jobs, and experience in part-time jobs), risk aversion, the Big Five personality traits, trust, positive reciprocity, negative reciprocity, region, and year dummies. Robust standard errors clustered at the individual level in parenthesis. * Denotes statistical significance at the 10% level, ** at the 5% level and *** at the 1% level.

Furthermore, the importance of career positively and significantly moderates the relationship between locus of control and private sector employment (1.7 pp; Model 1). Considering the occupation group of managers and professionals, the estimated coefficients are larger than they are for the whole sample, where I do not distinguish different occupation groups (Table 2, Model 1). The results indicate that managers and professionals with a high locus of control and intrinsic motives prefer to be employed in the public sector, whereas managers and professionals with a high locus of control and extrinsic motives search for a job in the private sector.

The remaining occupation groups do not show any significant results (Models 2 and 3). This is not surprising because the existing literature has shown that these occupation groups are expected to exhibit a low (external) locus of control (e.g., Andrisani, 1977; Caliendo et al., 2014; Cobb-Clark and Tan, 2011; Hansemark, 2003; Mitchell et al., 1975). Thus, as the theoretical considerations of this study also demonstrate, externals do not make goal-directed decisions in their life in terms of sector selection because they believe that life outcomes are outside their personal control, and therefore, matters of chance, luck, or fate or depend on powerful others (e.g., Cebi, 2007; Rotter, 1966; Wang et al., 2010).

Nevertheless, to the best of my knowledge, this study is the first to examine whether motives moderate the relationship between locus of control and public versus private sector employment in different occupation groups. In contrast, other studies have analyzed this question by solely investigating whether motives predicts public versus private sector employment within different branches or jobs (e.g., Ayaita et al., 2018; Kjeldsen and Jacobsen, 2013); alternatively, they have solely considered how, *inter alia*, locus of control affects the choice of several occupations or entrepreneurship (Andrisani, 1977; Caliendo et al., 2014; Cobb-Clark and Tan, 2011).

The results for the control variables are displayed in Table A7 in the Appendix.

6. Conclusion

Locus of control, along with its relationship with labor market outcomes, has been analyzed in various contexts (e.g., Bhagat and Chassie, 1978; Cebi, 2007; Cobb-Clark, 2015; Cummins, 1989; Heckman et al., 2006; Wu et al., 2015). Likewise, a huge amount of literature has investigated the connection between motives and public versus private sector employment (e.g., Buurman et al., 2012; Dur and Zoutenbier, 2014, 2015; Frank and Lewis, 2004; Houston, 2000, 2006; Steijn, 2008; Vandenabeele, 2008). This study fills a gap by examining whether the interaction of locus of control and intrinsic versus extrinsic motives leads to sorting patterns into the public versus private sector.

Inspired by the comprehensive locus of control literature, I assume that individuals with an internal (high) locus of control strategically decide to be employed in a specific labor sector, whereas individuals with an external (low) locus of control make less goal-directed decisions in terms of sector selection because, *inter alia*, they believe that life outcomes are outside their personal control (e.g., Krause, 2013; Rotter, 1966, 1990; Stiglbauer, 2017; Wang et al., 2010). Building on the predictive power of motives on labor market selection (e.g., Ayaita et al., 2018; Delfgaauw and Dur, 2007, 2008, 2010; Georgellis et al., 2011; Gregg et al., 2011), and considering that motives represent an explanatory mechanism when investigating the association between personality and labor market outcomes (e.g., Barrick et al., 2003; Johnson, 2003), I expect that motives will moderate the association of locus of control with public versus private sector employment. Thus, internal locus of control relates to a proactive mindset (e.g., Buddelmeyer and Powdthavee, 2016; Miller et al., 1982), in which individuals take responsibility for own life and work outcomes (e.g., Ng et al., 2006; Rotter, 1966; Spector, 1982) and belief that own efforts will lead to rewards (e.g., Cebi, 2007; Heineck and Anger, 2010; Lekfuangfu et al., 2017). Consequently, I hypothesize that intrinsic motivation will increase sorting into public sector employment among those with a more internal locus of

control because job activities in the public sector enable them to proactively follow or realize a self-concept (e.g., serving the community) more than those in the private sector do (Francois, 2000; Perry et al., 2010). Thus, individuals with a high (internal) locus of control believe that, in the public sector, their commitment will be rewarded in the form of intrinsic rewards (e.g., feeling of self-worth, sense of accomplishment, etc.). Likewise, I hypothesize that employees with a high sense of internal locus of control and extrinsic motives will self-select into the private sector, because in this sector, they can proactively determine their life/work outcomes by pursuing a utility concept (e.g., more career options, promotion opportunities, performance appraisals, etc.) than they could in the public sector.

Using longitudinal data with German employees, I largely find support for the hypotheses. Consequently, motives moderate the relationship between locus of control and public versus private sector employment: Higher intrinsic motivation (importance of civic engagement) positively and significantly moderates the relationship between locus of control and sorting into the public sector. At the same time, higher extrinsic motivation (importance of career) positively and significantly moderates the relationship between locus of control and the probability of entering the private sector after graduating. In addition to selection at labor market entry, this study also investigated selection during the career: It is apparent that extrinsic motives (importance of career) significantly moderate the relationship between locus of control and changes from the public to private sector in comparison with staying in the public sector.

The results largely hold when considering several robustness checks. They are robust for revealed preferences, hold for the occupation groups of managers and professionals, and are driven by men and individuals without a migration background.

In sum, this study determined that locus of control is not significantly associated with public versus private sector employment when the other explanatory variables are set to their mean value.

However, the interaction of motives and locus of control shows significant results. Thus, I contribute to the enormous body of locus of control literature by presenting that motives significantly moderate the relationship between locus of control and individuals' economic decisions to self-select into the public or private sector. Hitherto, the existing locus of control literature could ascertain that this non-cognitive skill affects a variety of other economic decisions, such as education, job searching, risky investments, and further (labor market) outcomes (e.g., Buddelmeyer and Powdthavee, 2016; Caliendo et al., 2014, 2015; Cobb-Clark et al., 2014; Coleman and DeLeire, 2003; Lekfuangfu et al., 2017; McGee, 2015; McGee and McGee, 2016; Salamanca et al., 2016; Schurer, 2017).

This study has several limitations. First, the estimated coefficients are not strong and highly significant. Second, not every intrinsic motive (importance of altruism) and extrinsic motive (importance of money) moderate the relationship between locus of control and public or private sector employment. Therefore, future research should consider another dataset where further motives are available. Concerning the econometric framework, this study lacks the possibility that it was not executable to exploit a reform to approximate the causality better than was done in this paper. To the best of my knowledge, I am not aware of such a reform, but it may be possible to find a solution via an instrument, and future research should attempt such a solution.

As another limitation, this paper only considers Germany, but it includes individuals with and without a migration background, and it finds that the results are partly different for those groups. Even the existing literature shows that cultural factors reveal different results between motives and public sector employment (Kim et al., 2013; Ritz and Brewer, 2013) or there are cross-cultural differences concerning locus of control (e.g., Hui, 1982; Kirkcaldy et al., 2007; Magwaza and Bhana, 1991). This speaks in favor of considering other countries to extend the understanding of the results.

The consideration of other personality traits, such as the dark triad traits (narcissism, psychopathy, and Machiavellianism), would bring new insights to this study. Thus, these personality traits explain important labor outcomes, especially in the private sector (Spurk et al., 2016). Unfortunately, these variables are not included in the SOEP. Therefore, other studies should use different datasets to shed further light on these aspects.

As possible implications, firms must carefully account for non-cognitive skills to motivate workers' behavior, especially in the jobs where I find that employees exhibit a low locus of control. Further implications could be that the public sector should attract individuals with extrinsic motives and a high locus of control by exploiting their extrinsic incentives. Simultaneously, the private sector should extend intrinsic incentives to attract employees with intrinsic motives and a high locus of control. Thus, a balanced mixture of both incentives and a high locus of control in both sectors could lead to huge gains concerning labor market outcomes, such as performance and job satisfaction.

There is potential for future research: Building on the results of this study, further literature should examine whether sorted individuals score higher in job satisfaction or exhibit an increase in job performance and organizational commitment, or alternatively, whether they show a decrease in quit intentions. Researchers have ascertained by means of experiments or matching models, for example, that better matched workers exert more effort, perform better, and show higher worker productivity than mismatched workers do (e.g., Besley and Ghatak, 2005; Carpenter and Gong, 2016; Fehrler and Kosfeld, 2014).

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Appendix

Table A1: Operationalization of all variables

Variable	Item	Scale
<u>Dependent variable</u>		
Public sector	Does the organization in which you are working belong to the public sector?	Dummy
<u>Main explanatory variables</u>		
Locus of control	The following statements apply to different attitudes towards life and the future. To what degree to you personally agree with the following statements?	Ordinal (1-7)
Internal locus of control	– How my life goes depends on me – One has to work hard in order to succeed – Inborn abilities are more important than any efforts one can make	
External locus of control	– Compared to other people, I have not achieved what I deserve – What a person achieves in life is above all a question of fate or luck – I frequently have the experience that other people have a controlling influence over my life – If I run up against difficulties in life, I often doubt my own abilities – The opportunities that I have in life are determined by the social conditions – I have little control over the things that happen in my life	
<u>Intrinsic motives</u>		
Importance of civic engagement	- Different things are important to different people. How important are the following things to you? – Being politically and/or socially committed	Ordinal (1-4)

Importance of altruism	• Different things are important to different people. How important are the following things to you? – Being there for others	Ordinal (1–4)
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Extrinsic motives

Importance of money	• Different things are important to different people. How important are the following things to you? – Being able to afford things for myself	Ordinal (1-4)
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Importance of career	• Different things are important to different people. How important are the following things to you? – Being successful in my career	Ordinal (1-4)
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Control variables

Other motives

Risk aversion	• Would you describe yourself as someone who tries to avoid risks (risk-averse) or as someone who is willing to take risks (risk-prone)?	Ordinal (0-10)
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Biographical/education/experience

Age	• Your birth year	Metric
Female	• Your sex	Dummy
Married	• What is your marital status?	Dummy
German citizenship	• Do you have German citizenship?	Dummy
Migration background	• Do you have direct or indirect migration background?	Dummy
College degree	• Did you obtain a college degree?	Dummy
Experience (full-time)	• Are you currently employed full-time?	Metric
Experience (part-time)	• Are you currently employed part-time?	Metric

Big Five personality traits

Openness	• I am original, someone who comes up with new ideas. • I am someone who values artistic, aesthetic experiences.	Ordinal (1–7)
Conscientiousness	• I am imaginative. • I am a thorough worker. • I am somewhat lazy. • I am effective and efficient in completing tasks.	Ordinal (1–7)
Extraversion	• I am communicative, talkative. • I am outgoing, sociable.	Ordinal (1–7)
Agreeableness	• I am reserved. • I am forgiving. • I am reserved.	Ordinal (1–7)
Neuroticism	• I am considerate and kind to others. • I am a worrier. • I am nervous. • I am relaxed, able to deal with stress.	Ordinal (1–7)

Additional personality traits

Trust	• People can generally be trusted • Nowadays one can't rely on anyone • If you are dealing with strangers, it is better to be careful before trusting them	Ordinal (1-4)
Positive reciprocity	• If someone does me a favor, I am prepared to return it • I go out of my way to help somebody who has been kind to me before • I am ready to undergo personal costs to help somebody who helped me before	Ordinal (1-7)
Negative reciprocity	• If I suffer a serious wrong, I will take revenge as soon as possible, no matter what the cost • If somebody puts me in a difficult position, I will do the same to him/her • If somebody offends me, I will offend him/her back	Ordinal (1–7)

- I tend to bear grudges
- When other people wrong me I try to just forgive and forget

Robustness checks

Revealed preferences

Voluntary activities	• Which of the following activities do you take part in during your free time? Please check off how often you do each activity. - Volunteer work in clubs or social services: at least once a week; at least once a month; less often; never	Ordinal (1-4)
Helping behavior	• Which of the following activities do you take part in during your free time? Please check off how often you do each activity. - Helping out friends, relatives or neighbors: at least once a week; at least once a month; less often; never	Ordinal (1-4)
Unpaid overtime	• And did you work overtime in the last month? • If so, how many hours? • How many of these hours were paid?	Dummy Metric Metric

Occupations

Managers	• What is your current occupation?	Dummy
Professionals		Dummy
Technicians		Dummy
Clerks		Dummy
Other		Dummy

Note: Concerning the analysis all socio-demographic variables reads as follows: Female, married, German citizenship, migration background, college degree (1 = yes). The item of risk aversion ranges from 'risk averse' to 'fully prepared to take risks'. For the analysis the item is inverted, so that higher values correspond to higher risk aversion and z-standardized for the estimates. The Big Five are represented through 15 items in the SOEP. These items range from 'does not apply to me at all' to 'applies to me perfectly'. All items that are negatively related to each of the Big Five traits are first inverted. Then each five traits are constructed by an average score. The three items of trust range from 'totally agree' to 'totally disagree'. For the purpose, one item that is negatively related to the trait, is inverted. The items of reciprocity range from 'does not apply to me at all' to 'applies to me perfectly'. For negative reciprocity, one item is negatively related to this trait and therefore inverted for the analysis. Trust and reciprocity measures are computed through an average score.

Table A2: Descriptive statistics of all variables

Variable	Mean		Std. dev.	
Public sector	0.308		0.462	
Variables	Public sector		Private sector	
	Mean	Std. dev.	Mean	Std. dev.
<u>Locus of control</u>	4.977	0.680	4.948	0.727
<u>Intrinsic motives</u>				
Importance of civic engagement	2.248	0.716	2.018	0.698
Importance of altruism	3.237	0.546	3.189	0.546
<u>Extrinsic motives</u>				
Importance of money	2.987	0.562	3.066	0.578
Importance of career	2.994	0.617	3.051	0.633
<u>Control variables</u>				
Other motives				
Risk aversion	5.515	2.124	5.209	2.158
Biographical/education/experience				
Age	46.511	10.377	44.039	10.630
Female	0.564	0.496	0.432	0.495
Married	0.681	0.466	0.651	0.477
German citizenship	0.986	0.119	0.961	0.194
Migration background	0.112	0.316	0.161	0.368
College degree	0.427	0.495	0.229	0.420
Experience (full-time)	18.098	11.828	17.652	11.477
Experience (part-time)	4.232	6.569	3.024	5.739
Big Five personality traits				
Openness	4.624	1.136	4.442	1.130
Conscientiousness	5.899	0.861	5.937	0.854
Extraversion	4.874	1.127	4.827	1.120
Agreeableness	5.383	0.931	5.314	0.959
Neuroticism	3.744	1.194	3.716	1.180
Additional personality traits				
Trust	2.449	0.518	2.351	0.526
Positive reciprocity	5.845	0.879	5.865	0.864
Negative reciprocity	3.034	1.222	3.238	1.292

Robustness checks**Revealed preferences**

Voluntary activities	1.840	1.091	1.628	1.002
Helping behavior	2.477	0.730	2.496	0.729
Unpaid overtime	7.337	12.337	8.296	14.326

Occupations

Managers	0.033	0.180	0.074	0.262
Professionals	0.383	0.486	0.144	0.351
Technicians	0.337	0.473	0.243	0.429
Clerks	0.080	0.271	0.142	0.349
Service	0.069	0.253	0.102	0.303
Other	0.086	0.281	0.295	0.456

$N = 66,291$ observations. Public sector: $n_1 = 20,445$ observations. Private sector: $n_2 = 45,846$ observations.

Table A3: Locus of control, motives, and public versus private sector employment, all coefficients displayed

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.004 (0.004)	0.011 (0.018)	-0.001 (0.001)	-0.002 (0.002)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.048*** (0.004)	0.033* (0.018)	0.004*** (0.001)	-0.004** (0.002)
Imp. altruism	0.008** (0.004)	0.019 (0.017)	0.000 (0.001)	-0.001 (0.002)
<u>Extrinsic motives</u>				
Imp. money	-0.007* (0.004)	-0.006 (0.017)	-0.002** (0.001)	-0.001 (0.002)
Imp. career	-0.015*** (0.004)	-0.032* (0.017)	0.000 (0.001)	0.005** (0.002)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.008** (0.003)	0.027* (0.016)	-0.000 (0.001)	-0.002 (0.002)
Imp. altruism x loc	-0.002 (0.003)	-0.017 (0.015)	-0.000 (0.001)	-0.000 (0.002)
Imp. money x loc	-0.000 (0.003)	-0.013 (0.015)	-0.001 (0.001)	-0.003 (0.002)
Imp. career x loc	-0.006** (0.003)	-0.035** (0.014)	0.000 (0.001)	0.004*** (0.002)
<u>Control variables</u>				
Risk aversion	0.024*** (0.003)	0.028 (0.017)	0.000 (0.001)	-0.006*** (0.002)
Age	0.001 (0.001)	-0.008** (0.004)	0.000 (0.000)	0.000 (0.000)
Female	0.100*** (0.011)	0.076* (0.039)	0.012*** (0.002)	0.003 (0.004)
Married	-0.004 (0.009)	0.031 (0.075)	-0.001 (0.002)	-0.008* (0.004)
German citizenship	0.067*** (0.021)	0.071 (0.073)	-0.003 (0.005)	-0.028 (0.020)
Migration background	-0.044*** (0.013)	-0.084* (0.044)	0.002 (0.002)	0.014** (0.007)
College degree	0.174*** (0.011)		0.002 (0.002)	-0.031*** (0.004)

College degree by next year		0.164*** (0.041)		
Experience (full-time)	0.003*** (0.001)		-0.001*** (0.000)	-0.002*** (0.000)
Experience (part-time)	0.004*** (0.001)		-0.001** (0.000)	-0.001** (0.001)
Openness	0.016*** (0.004)	0.002 (0.018)	0.003*** (0.001)	0.001 (0.002)
Conscientiousness	-0.014*** (0.004)	-0.007 (0.019)	0.001 (0.001)	0.004** (0.002)
Extraversion	0.003 (0.004)	0.024 (0.019)	-0.000 (0.001)	-0.000 (0.002)
Agreeableness	-0.000 (0.004)	0.015 (0.017)	0.002** (0.001)	0.001 (0.002)
Neuroticism	-0.001 (0.004)	-0.016 (0.018)	0.001 (0.001)	0.001 (0.002)
Trust	0.008** (0.004)	-0.005 (0.017)	0.002*** (0.001)	0.003* (0.002)
Positive reciprocity	-0.009** (0.004)	-0.002 (0.017)	-0.002** (0.001)	-0.001 (0.002)
Negative reciprocity	-0.008** (0.004)	0.004 (0.018)	-0.001 (0.001)	0.005** (0.002)
Region dummies	✓	✓	✓	✓
Year dummies	✓	✓	✓	✓
Constant	0.084* (0.046)	0.382** (0.165)	-0.002 (0.009)	0.057** (0.026)
Observations	66,291	782	45,846	20,445
R-squared	0.092	0.116	0.015	0.040

Table A4: Robustness check: revealed preferences and public versus private sector employment, all coefficients displayed

Variables	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.005 (0.004)	0.019 (0.018)	-0.001 (0.001)	-0.002 (0.002)
<u>Revealed Preferences</u>				
<u>Intrinsic motives</u>				
Voluntary activities	0.036*** (0.004)	0.042** (0.018)	0.003*** (0.001)	-0.002 (0.002)
Helping behavior	0.003 (0.004)	0.020 (0.017)	0.001* (0.001)	-0.001 (0.002)
<u>Extrinsic motives</u>				
Unpaid overtime	-0.019*** (0.003)	-	-0.000 (0.001)	0.005** (0.002)
<u>Interaction terms</u>				
Voluntary act. x loc	0.007* (0.004)	0.043** (0.017)	-0.000 (0.001)	0.001 (0.002)
Helping beh. x loc	-0.002 (0.003)	-0.017 (0.015)	-0.000 (0.001)	-0.000 (0.002)
Unpaid over. x loc	-0.008*** (0.003)	-	-0.000 (0.001)	0.002 (0.002)
<u>Control variables</u>				
Risk aversion	0.022*** (0.003)	0.027 (0.017)	-0.000 (0.001)	-0.006*** (0.002)
Age	0.001 (0.001)	-0.006* (0.004)	0.000* (0.000)	0.000 (0.000)
Female	0.100*** (0.011)	0.084** (0.038)	0.012*** (0.002)	0.004 (0.004)
Married	-0.007 (0.009)	0.041 (0.074)	-0.002 (0.002)	-0.007* (0.004)
German citizenship	0.071*** (0.021)	0.049 (0.070)	-0.003 (0.005)	-0.032 (0.020)
Migration background	-0.043*** (0.013)	-0.078* (0.045)	0.001 (0.002)	0.012* (0.007)
College degree	0.191*** (0.011)		0.004* (0.002)	-0.033*** (0.004)

College degree by next year		0.171*** (0.041)		
Experience (full-time)	0.003** (0.001)		-0.001*** (0.000)	-0.002*** (0.000)
Experience (part-time)	0.003** (0.001)		-0.001* (0.000)	-0.001** (0.001)
Openness	0.020*** (0.004)	0.004 (0.018)	0.003*** (0.001)	0.001 (0.002)
Conscientiousness	-0.016*** (0.004)	-0.016 (0.019)	0.000 (0.001)	0.005*** (0.002)
Extraversion	0.003 (0.004)	0.025 (0.019)	-0.000 (0.001)	-0.000 (0.002)
Agreeableness	0.001 (0.004)	0.020 (0.017)	0.002** (0.001)	0.001 (0.002)
Neuroticism	0.001 (0.004)	-0.012 (0.018)	0.001 (0.001)	0.001 (0.002)
Trust	0.012*** (0.004)	-0.002 (0.017)	0.002*** (0.001)	0.003 (0.002)
Positive reciprocity	-0.007* (0.004)	-0.002 (0.017)	-0.002*** (0.001)	-0.002 (0.002)
Negative reciprocity	-0.011*** (0.004)	-0.001 (0.017)	-0.001 (0.001)	0.005** (0.002)
Region dummies	✓	✓	✓	✓
Year dummies	✓	✓	✓	✓
Constant	0.063 (0.046)	0.349** (0.161)	-0.002 (0.009)	0.061** (0.026)
Observations	64,221	774	44,484	19,737
R-squared	0.091	0.107	0.015	0.040

Table A5: Robustness check: gender and public versus private sector employment, all coefficients displayed

Female	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.005 (0.006)	-0.029 (0.027)	-0.002 (0.002)	-0.005* (0.003)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.044*** (0.006)	-0.014 (0.028)	0.004*** (0.001)	-0.003 (0.003)
Imp. altruism	0.008 (0.005)	0.022 (0.026)	-0.001 (0.001)	-0.002 (0.002)
<u>Extrinsic motives</u>				
Imp. money	-0.009 (0.006)	0.012 (0.027)	-0.003** (0.001)	-0.002 (0.003)
Imp. career	-0.003 (0.006)	-0.018 (0.027)	0.002 (0.001)	0.007*** (0.002)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.005 (0.005)	0.022 (0.025)	-0.001 (0.001)	0.002 (0.003)
Imp. altruism x loc	-0.005 (0.005)	-0.008 (0.023)	-0.000 (0.001)	0.000 (0.002)
Imp. money x loc	0.005 (0.005)	0.019 (0.024)	-0.001 (0.001)	-0.005 (0.003)
Imp. career x loc	-0.006 (0.005)	-0.032 (0.022)	-0.000 (0.001)	0.002 (0.002)
<u>Control variables</u>				
Risk aversion	0.021*** (0.005)	0.042* (0.026)	-0.001 (0.001)	-0.006** (0.003)
Age	0.001 (0.001)	-0.009* (0.004)	0.000 (0.000)	-0.000 (0.001)
Married	0.014 (0.013)	0.059 (0.092)	-0.001 (0.003)	-0.011** (0.006)
German citizenship	0.118*** (0.035)	0.067 (0.131)	0.004 (0.008)	-0.020 (0.026)
Migration background	-0.010 (0.020)	-0.037 (0.065)	0.003 (0.004)	0.011 (0.008)
College degree	0.220*** (0.016)		0.007* (0.004)	-0.037*** (0.006)

College degree by next year		0.173*** (0.056)		
Experience (full-time)	0.003** (0.001)		-0.001** (0.000)	-0.002*** (0.001)
Experience (part-time)	0.004** (0.002)		-0.001* (0.000)	-0.001 (0.001)
Openness	0.025*** (0.006)	0.022 (0.025)	0.004*** (0.001)	-0.001 (0.003)
Conscientiousness	-0.019*** (0.006)	-0.005 (0.031)	0.003* (0.002)	0.007*** (0.003)
Extraversion	-0.004 (0.007)	0.035 (0.028)	0.000 (0.001)	-0.001 (0.003)
Agreeableness	0.008 (0.006)	0.002 (0.026)	0.001 (0.001)	-0.002 (0.003)
Neuroticism	-0.000 (0.006)	-0.061** (0.027)	0.001 (0.001)	0.000 (0.003)
Trust	0.009 (0.006)	0.009 (0.024)	0.003** (0.001)	0.005* (0.003)
Positive reciprocity	-0.007 (0.005)	0.001 (0.024)	-0.003** (0.001)	-0.004 (0.002)
Negative reciprocity	-0.013** (0.006)	0.026 (0.026)	-0.003** (0.001)	0.002 (0.003)
Region dummies	✓	✓	✓	✓
Year dummies	✓	✓	✓	✓
Constant	0.048 (0.065)	0.627*** (0.232)	-0.004 (0.015)	0.085** (0.036)
Observations	31,321	421	19,790	11,531
R-squared	0.090	0.123	0.018	0.047

Table A5: Robustness check: gender and public versus private sector employment, all coefficients displayed

Male	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.005 (0.006)	0.047* (0.025)	-0.001 (0.001)	0.003 (0.003)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.049*** (0.005)	0.055** (0.023)	0.003*** (0.001)	-0.004* (0.003)
Imp. altruism	0.010** (0.005)	0.028 (0.023)	0.001 (0.001)	0.001 (0.003)
<u>Extrinsic motives</u>				
Imp. money	-0.006 (0.005)	-0.008 (0.021)	-0.001 (0.001)	0.001 (0.003)
Imp. career	-0.024*** (0.005)	-0.036 (0.022)	-0.000 (0.001)	0.002 (0.003)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.011*** (0.004)	0.017 (0.021)	0.000 (0.001)	-0.005** (0.003)
Imp. altruism x loc	-0.002 (0.004)	-0.004 (0.020)	0.000 (0.001)	-0.000 (0.003)
Imp. money x loc	-0.005 (0.004)	-0.047** (0.020)	-0.001 (0.001)	-0.003 (0.003)
Imp. career x loc	-0.005 (0.004)	-0.061*** (0.018)	0.001 (0.001)	0.007*** (0.003)
<u>Control variables</u>				
Risk aversion	0.026*** (0.005)	0.015 (0.022)	0.001 (0.001)	-0.005* (0.003)
Age	0.002 (0.002)	-0.001 (0.009)	0.001** (0.000)	0.002** (0.001)
Married	-0.017 (0.013)	0.064 (0.153)	0.000 (0.002)	-0.000 (0.006)
German citizenship	0.027 (0.026)	0.051 (0.072)	-0.007 (0.005)	-0.031 (0.030)
Migration background	-0.077*** (0.017)	-0.141** (0.055)	0.000 (0.003)	0.023** (0.011)
College degree	0.126*** (0.017)		-0.003 (0.002)	-0.031*** (0.006)

College degree by next year		0.165*** (0.064)		
Experience (full-time)	0.001 (0.002)		-0.001*** (0.000)	-0.003*** (0.001)
Experience (part-time)	0.006* (0.003)		0.001 (0.001)	0.001 (0.002)
Openness	0.005 (0.006)	-0.014 (0.025)	0.001 (0.001)	0.002 (0.003)
Conscientiousness	-0.008 (0.006)	-0.008 (0.024)	-0.000 (0.001)	0.002 (0.003)
Extraversion	0.007 (0.006)	0.028 (0.026)	-0.000 (0.001)	0.001 (0.003)
Agreeableness	-0.007 (0.005)	0.015 (0.025)	0.002** (0.001)	0.005* (0.003)
Neuroticism	-0.003 (0.006)	0.018 (0.026)	0.001 (0.001)	0.002 (0.003)
Trust	0.008 (0.005)	-0.036 (0.024)	0.001 (0.001)	0.001 (0.003)
Positive reciprocity	-0.012** (0.005)	-0.022 (0.025)	-0.001 (0.001)	0.003 (0.002)
Negative reciprocity	-0.005 (0.005)	-0.039 (0.026)	0.001 (0.001)	0.007** (0.003)
Region dummies	✓	✓	✓	✓
Year dummies	✓	✓	✓	✓
Constant	0.159** (0.069)	0.122 (0.246)	0.003 (0.011)	0.007 (0.037)
Observations	34,970	361	26,056	8,914
R-squared	0.081	0.235	0.012	0.042

Table A6: Robustness check: migration background and public versus private sector employment, all coefficients displayed

No migration background	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	0.007 (0.005)	0.017 (0.020)	-0.001 (0.001)	-0.001 (0.002)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.050*** (0.004)	0.043** (0.020)	0.003*** (0.001)	-0.004** (0.002)
Imp. altruism	0.008** (0.004)	0.025 (0.020)	0.000 (0.001)	-0.000 (0.002)
<u>Extrinsic motives</u>				
Imp. money	-0.006 (0.004)	-0.020 (0.018)	-0.003*** (0.001)	-0.002 (0.002)
Imp. career	-0.017*** (0.004)	-0.026 (0.020)	0.001 (0.001)	0.005*** (0.002)
<u>Interaction terms</u>				
Imp. civic eng. x loc	0.010*** (0.004)	0.034* (0.017)	0.001 (0.001)	-0.001 (0.002)
Imp. altruism x loc	-0.000 (0.003)	-0.013 (0.017)	0.000 (0.001)	-0.000 (0.002)
Imp. money x loc	-0.001 (0.003)	-0.008 (0.015)	-0.001 (0.001)	-0.002 (0.002)
Imp. career x loc	-0.007* (0.004)	-0.040** (0.017)	-0.000 (0.001)	0.004** (0.002)
<u>Control variables</u>				
Risk aversion	0.029*** (0.004)	0.038* (0.020)	0.000 (0.001)	-0.007*** (0.002)
Age	0.000 (0.001)	-0.007 (0.004)	0.000 (0.000)	0.000 (0.000)
Female	0.094*** (0.012)	0.055 (0.043)	0.012*** (0.002)	0.003 (0.005)
Married	-0.002 (0.010)	0.028 (0.089)	-0.000 (0.002)	-0.011** (0.004)
College degree	0.178*** (0.012)		0.004 (0.002)	-0.027*** (0.004)
College degree by next year		0.169*** (0.046)		
Experience (full-time)	0.003***		-0.001***	-0.002***

	(0.001)		(0.000)	(0.000)
Experience (part-time)	0.004***		-0.001*	-0.001*
	(0.001)		(0.000)	(0.001)
Openness	0.014***	0.011	0.003***	0.002
	(0.005)	(0.020)	(0.001)	(0.002)
Conscientiousness	-0.016***	-0.001	0.000	0.004*
	(0.005)	(0.023)	(0.001)	(0.002)
Extraversion	0.003	0.027	0.000	-0.001
	(0.005)	(0.020)	(0.001)	(0.002)
Agreeableness	-0.002	0.008	0.002*	0.001
	(0.005)	(0.020)	(0.001)	(0.002)
Neuroticism	-0.003	-0.029	0.001	0.003
	(0.005)	(0.021)	(0.001)	(0.002)
Trust	0.008*	-0.008	0.002**	0.002
	(0.004)	(0.020)	(0.001)	(0.002)
Positive reciprocity	-0.010**	0.007	-0.002***	-0.003
	(0.004)	(0.018)	(0.001)	(0.002)
Negative reciprocity	-0.008*	0.007	-0.000	0.003
	(0.004)	(0.020)	(0.001)	(0.002)
Region dummies	✓	✓	✓	✓
Year dummies	✓	✓	✓	✓
Constant	0.155***	0.414**	-0.009	0.030*
	(0.044)	(0.162)	(0.008)	(0.018)
Observations	56,609	641	38,458	18,151
R-squared	0.092	0.124	0.016	0.039

Table A6: Robustness check: migration background and public versus private sector employment, all coefficients displayed

Migration background	Whole sample	Selection at labor market entry	Selection during the career	
	(1) Public sector employment	(2) Public sector employment in the next year	(3) Change from private to public sector in the next year	(4) Change from public to private sector in the next year
Locus of control (loc)	-0.010 (0.009)	0.007 (0.052)	-0.003 (0.002)	-0.005 (0.007)
<u>Intrinsic motives</u>				
Imp. civic engagement	0.033*** (0.008)	-0.097** (0.045)	0.007*** (0.003)	-0.003 (0.006)
Imp. altruism	0.006 (0.008)	-0.003 (0.034)	0.002 (0.002)	-0.002 (0.006)
<u>Extrinsic motives</u>				
Imp. money	-0.014* (0.008)	0.071 (0.045)	0.000 (0.002)	0.002 (0.007)
Imp. career	0.001 (0.008)	-0.045 (0.032)	-0.000 (0.002)	0.004 (0.007)
<u>Interaction terms</u>				
Imp. civic eng. x loc	-0.002 (0.006)	-0.066 (0.041)	-0.004* (0.002)	-0.003 (0.006)
Imp. altruism x loc	-0.014** (0.006)	-0.036 (0.033)	-0.002 (0.002)	-0.003 (0.006)
Imp. money x loc	0.002 (0.007)	-0.086* (0.048)	-0.001 (0.002)	-0.010 (0.006)
Imp. career x loc	-0.004 (0.007)	0.035 (0.041)	0.002 (0.002)	0.012** (0.006)
<u>Control variables</u>				
Risk aversion	-0.005 (0.007)	-0.008 (0.035)	-0.002 (0.002)	0.006 (0.006)
Age	0.001 (0.002)	-0.027** (0.011)	0.000 (0.001)	-0.001 (0.002)
Female	0.133*** (0.025)	0.241*** (0.085)	0.014*** (0.005)	0.011 (0.016)
Married	-0.014 (0.022)	0.193 (0.154)	-0.005 (0.005)	0.013 (0.014)
College degree	0.130*** (0.028)		-0.005 (0.006)	-0.062*** (0.014)
College degree by next year		0.205* (0.109)		
Experience (full-time)	0.001 (0.002)		-0.000 (0.000)	-0.001 (0.002)

Experience (part-time)	0.003 (0.003)		-0.001 (0.001)	-0.002 (0.002)
Openness	0.022** (0.010)	0.027 (0.043)	0.003 (0.002)	-0.010 (0.007)
Conscientiousness	-0.005 (0.010)	-0.072** (0.036)	0.002 (0.002)	0.009 (0.007)
Extraversion	0.002 (0.010)	0.005 (0.046)	-0.002 (0.002)	0.010 (0.007)
Agreeableness	0.017* (0.009)	0.065 (0.044)	0.002 (0.002)	0.002 (0.008)
Neuroticism	0.008 (0.010)	0.051 (0.052)	0.000 (0.002)	-0.011 (0.007)
Trust	0.009 (0.009)	0.004 (0.043)	0.004** (0.002)	0.015** (0.007)
Positive reciprocity	-0.002 (0.009)	-0.074 (0.054)	-0.000 (0.002)	0.007 (0.006)
Negative reciprocity	-0.003 (0.009)	-0.034 (0.036)	-0.001 (0.002)	0.014** (0.007)
Region dummies	✓	✓	✓	✓
Year dummies	✓	✓	✓	✓
Constant	0.018 (0.108)	1.129*** (0.338)	0.022 (0.024)	0.046 (0.051)
Observations	9,682	141	7,388	2,294
R-squared	0.112	0.460	0.023	0.074

**Table A7: Robustness check: public sector employment in different occupations,
all coefficients displayed**

Variables	(1) Managers & professionals	(2) Technicians, clerks & service	(3) Other
Locus of control (loc)	-0.008 (0.008)	0.000 (0.006)	0.005 (0.006)
<u>Intrinsic motives</u>			
Imp. civic engagement	0.062*** (0.007)	0.034*** (0.005)	0.015*** (0.005)
Imp. altruism	0.009 (0.007)	0.007 (0.005)	0.007 (0.005)
<u>Extrinsic motives</u>			
Imp. money	-0.013* (0.007)	-0.001 (0.005)	-0.006 (0.005)
Imp. career	-0.022*** (0.008)	-0.017*** (0.005)	-0.018*** (0.005)
<u>Interaction terms</u>			
Imp. civic eng. x loc	0.011* (0.006)	0.006 (0.005)	0.004 (0.004)
Imp. altruism x loc	0.001 (0.006)	-0.004 (0.004)	-0.003 (0.003)
Imp. money x loc	0.006 (0.006)	-0.003 (0.004)	-0.000 (0.004)
Imp. career x loc	-0.017** (0.007)	-0.001 (0.005)	0.001 (0.004)
<u>Control variables</u>			
Risk aversion	0.050*** (0.007)	0.019*** (0.005)	0.003 (0.005)
Age	0.007*** (0.002)	-0.001 (0.001)	0.000 (0.002)
Female	0.149*** (0.020)	0.043*** (0.015)	-0.026 (0.017)
Married	-0.036** (0.017)	0.018 (0.013)	-0.005 (0.013)
German citizenship	0.027 (0.058)	0.065* (0.034)	0.038* (0.021)
Migration background	-0.046 (0.028)	-0.019 (0.020)	-0.034* (0.018)
College degree	0.153*** (0.019)	-0.003 (0.017)	0.033 (0.041)
Experience (full-time)	-0.002 (0.002)	0.005*** (0.001)	0.003* (0.002)
Experience (part-time)	0.005* (0.003)	0.003* (0.002)	0.008*** (0.003)
Openness	0.012	0.022***	-0.005

	(0.009)	(0.006)	(0.006)
Conscientiousness	-0.009	-0.010	0.001
	(0.008)	(0.006)	(0.006)
Extraversion	-0.001	0.004	0.006
	(0.008)	(0.006)	(0.006)
Agreeableness	0.016*	-0.004	0.002
	(0.008)	(0.006)	(0.006)
Neuroticism	0.006	-0.004	0.004
	(0.008)	(0.006)	(0.006)
Trust	0.011	-0.002	-0.003
	(0.008)	(0.006)	(0.005)
Positive reciprocity	-0.012	-0.009	0.000
	(0.008)	(0.005)	(0.005)
Negative reciprocity	-0.015*	-0.009	0.005
	(0.009)	(0.006)	(0.005)
Region dummies	✓	✓	✓
Year dummies	✓	✓	✓
Constant	0.061	0.113*	0.039
	(0.103)	(0.063)	(0.067)
Observations	18,423	32,114	15,245
R-squared	0.154	0.030	0.045