



university of  
 groningen

faculty of economics  
 and business

**16006-GEM**

**Trust and Signals in Workplace  
 Organization: Evidence from Job  
 Autonomy Differentials between  
 Immigrant Groups**

André van Hoorn



SOM is the research institute of the Faculty of Economics & Business at the University of Groningen. SOM has six programmes:

- Economics, Econometrics and Finance
- Global Economics & Management
- Human Resource Management & Organizational Behaviour
- Innovation & Organization
- Marketing
- Operations Management & Operations Research

Research Institute SOM  
Faculty of Economics & Business  
University of Groningen

Visiting address:  
Nettelbosje 2  
9747 AE Groningen  
The Netherlands

Postal address:  
P.O. Box 800  
9700 AV Groningen  
The Netherlands

T +31 50 363 9090/3815

[www.rug.nl/feb/research](http://www.rug.nl/feb/research)



# **Trust and Signals in Workplace Organization: Evidence from Job Autonomy Differentials between Immigrant Groups**

André van Hoorn

University of Groningen, Faculty of Economics and Business, Department Global  
Economics and Management

[a.a.j.van.hoorn@rug.nl](mailto:a.a.j.van.hoorn@rug.nl)

# Trust and Signals in Workplace Organization: Evidence from Job Autonomy Differentials between Immigrant Groups

André van Hoorn

*University of Groningen, PO Box 800, 9700 AV, Groningen, the Netherlands.*

*Tel: +31 503 633 929, Fax: +31 503 632 341, E-mail: A.A.J.van.Hoorn@rug.nl.*

**JEL classification:** D29, L29, M50

**Keywords:** Trustworthiness; decentralization; statistical discrimination; signaling theory;  
economic exchange

# Trust and Signals in Workplace Organization: Evidence from Job Autonomy Differentials Between Immigrant Groups

## Abstract

Trust involves a willingness to be vulnerable to other agents' actions as well as an assessment of these agents' trustworthiness. This paper seeks to unpack the relationship between trust and workplace organization, focusing on signals of (un)trustworthiness guiding employers' trust decisions. While much research finds that societal trust norms affect workplace organization, particularly the granting of autonomy to employees, the underlying process remains essentially a black box. Integrating extant literatures, I posit that employers use group-level traits to infer (un)trustworthiness and decide on how much job autonomy to grant to specific employees. I test this prediction in a large cross-national sample comprising migrant employees originating from home countries that differ in the degree to which corruption has been institutionalized in society. Confirming my prediction, empirical results reveal a strong negative relationship between home-country corruption and job autonomy. Results are robust to controlling for a range of potential confounders, including personal income and home-country level of economic development as proxies for unobserved skill differentials. Key contribution of the paper is to reveal important real-world features of trust governing exchange in the context of workplace organization.

The role of trust in governing workplace organization is widely recognized (Arrow 1974; Granovetter 1985). Fukuyama (1995: 31), for instance, finds that trust fosters flexibility in the workplace and the assigning of greater responsibility at lower levels of the organization. Moreover, by now, there are several empirical studies linking societal differences in trust norms to average firm size and, particularly, the granting of autonomy to employees (Akcigit et al. 2016; Bloom et al. 2012; La Porta et al. 1997). However, insight on deeper processes that play a role in the link between trust and key features of workplace organization such as job autonomy remains lacking.

This paper seeks to unpack the black box of trust governing exchange in the context of workplace organization, specifically the decision of how much autonomy to grant to employees. In market settings, trust is understood to involve both a willingness to be vulnerable to the actions of the other party and an assessment of the counterparty's trustworthiness (Arrow 1972; Granovetter 1985; North 1990). Not all (potential) exchange partners are equally trustworthy and drawing on a variety of signals allows actors to make an informed assessment of the risk of transacting with a particular party (Coleman 1990; Gambetta and Hill 2005; Hardin 2002). In workplace settings, principals that outsource tasks to agents are similarly vulnerable to agents' actions. In general, decentralization and outsourcing of tasks are desirable for efficiency reasons. Trust issues, however, prevent principals from simply granting complete autonomy to their agents and reap the full benefits of specialization through the division of labor. Hence, an essential decision in workplace organization is for employers to differentiate between those employees that they can trust more and offer higher degrees of job autonomy to and those employees that they can trust less and need to monitor and control more closely. The concrete aim of this paper is to uncover some specifics of the process and factors guiding employers to

decide on how much autonomy to grant to different employees.

The literature with most relevance to this issue involves studies that consider employers differentiating between employees in the context of recruitment decisions. Key insights from this literature concern the role of signaling (Spence 1974) and statistical discrimination (Arrow 1973; Phelps 1972). Faced with limited information by which to judge potential employees, employers rely on employee signals as well as other observable characteristics to make rational inferences about underlying intangible traits and dispositions (Altonji and Pierret 2001). Oft-mentioned signals or observables are educational credentials but also membership to a particular social group, for example, blacks versus whites.<sup>1</sup> Also relevant is the literature on trust in game experiments, specifically studies of the effect of (unintentional) signals on the amount of trust that an individual trustor places in certain trustees. Fershtman and Gneezy (2001), for instance, report that among two groups of Israeli Jews, those from European and American descent were trusted more than their fellow citizens from Asian and African descent were. Other work finds that even a simple signal such as counterparties' physical appearance can affect trustors' behavior in experimental trust games (Eckel and Petrie 2011; Van 't Wout and Sanfey 2008). Finally, McEvily et al. (2012) found evidence indicating that laboratory trust decisions were shaped by trustors' perceptions of trustees, which, in turn, were based on observable background characteristics.

Following the above body of research, the specific feature of the trust-autonomy nexus

---

<sup>1</sup> Strictly speaking, we may distinguish between intentional signals consciously sent by prospective employees and unintentional signals or informational cues as derived by employers from observable characteristics of employees. This distinction is not material to the analysis in the present paper, however.

considered in this paper is how group-level traits, as emphasized by theories of statistical discrimination (Arrow 1973; Phelps 1972), go on to generate job autonomy differentials between individuals belonging to different social groups. My expectation is that employers use group-level traits as a signal of (un)trustworthiness and are more/less willing to grant autonomy to workers belonging to social groups with positive/negative images concerning honesty and reliability. Trustworthiness is often considered in terms of reputation building and repeated interactions that allow trust between two parties to develop over time (Dasgupta 1988; Granovetter 1985). My interest is not in specifics of the relationship between selected principals and agents, however, but in broad patterns of job autonomy differentials that testify to the process and factors that guide employers' decisions of how much autonomy to grant to specific employees.

Reflective of this interest, the chosen research context for my analysis is a cross-national sample of immigrants, which is close to ideal for studying broad patterns of job autonomy as a real-world outcome variable instead of individual-specific autonomy decisions. As outsiders in their host country, migrants appear especially vulnerable to stereotypes and differential treatment based on statistical inferences, as also shown in the large literature on ethnic discrimination in recruitment decisions (see Lang and Lehmann 2012 for a survey). Moreover, certain traits of migrants' home countries can be quite salient, making it possible for employers to rely on these traits when offering differential treatment to members of different social groups on the basis of inferred trustworthiness. The specific hypothesis that I test is that the degree to which corruption is institutionalized in a migrant's home country has a negative effect on his/her level of job autonomy. The argument is that the level of corruption in the home country affects an individual's job autonomy because employers take an individual's association with corruption as



a signal of his/her trustworthiness. The sample that I use comprises 9,150 migrants from 157 home countries currently residing in a set of 32 mostly European countries. The empirical analysis provides strong support for my hypothesis, indicating a strong negative relationship between home-country corruption and job autonomy. An extensive set of robustness checks provides further confirmation of the idea that home-country corruption is taken as a signal of individuals' trustworthiness and ends up affecting how much job autonomy migrant employees from different home countries have in their host countries.

The key contribution of this paper is to present real-world evidence on an important feature underlying the process of trust governing exchange in the context of workplace organization. In doing so, this paper helps extend and bring together a set of disparate literatures. While employers' reliance on employee signals and statistical inferences when making employment decisions is widely recognized, these decisions are typically limited to recruitment and selection. Moving beyond initial recruitment decisions, this paper shows the relevance of signaling and statistical discrimination also in the post-recruitment managerial treatment of distinct groups of employees. Similarly, while prior research has found that various traits of the counterparty can affect an individual's trusting behavior, this evidence remains limited to decisions made in laboratory settings. This paper, in contrast, has sought to move beyond individual trust decisions to consider how employers' consideration of signals of (un)trustworthiness pans out in the real world, giving rise to systematic patterns of job autonomy differentials between individuals from different ethno-national backgrounds. Finally, though not the main concern of the present paper, the evidence of the effect of home-country corruption on individuals' managerial treatment testifies to the importance of statistical discrimination for the extent to which individual migrants are able to integrate successfully in the workplace. As home-

country traits are strictly beyond individuals' control, how a migrant's home country scores on various traits may be one of the most significant barriers that a migrant faces in achieving professional success in his/her host country.

## **I. Theoretical Background and Empirical Approach**

### *A. Job Autonomy and Signals of Trustworthiness*

This paper's interest in job autonomy as a key feature of workplace organization resonates with the long-standing literature relating the organization of the workplace to possible efficiency gains due to comparative advantage that traces back to Adam Smith's famous pin factory. A straightforward definition of job autonomy is as "the condition or quality of being self-governing or free from excessive external control" (Jermier and Michaels 2001: 1006). When it comes to job autonomy, the ultimate challenge that employers face in deciding how much autonomy to grant to different employees is to strike a balance between the costs and benefits of different amounts of autonomy versus the intensity of monitoring and control. Monitoring and control thereby have direct costs in terms of taking up some of the firms' resources, for instance, managerial attention. More importantly, however, there is an essential connection between the costs and benefits of control on the one hand and the costs and benefits of autonomy on the other.

The classic understanding of the specialization benefits of employee autonomy comprises two elements. The first is that employees are specialists that have gained unique knowledge on how to perform their production tasks most efficiently. The second is that the specific knowledge or skills that employees have accumulated are typically tacit (or at least only partly codifiable) so that leveraging this knowledge requires that employees are granted freedom to perform their job

in the way they deem best. As non-specialists, managers or employers should refrain from prescribing employees how they should do their job, as the former's lack of relevant knowledge results in a production process that is less efficient than a production process that is organized by specialist employees themselves. Part of the costs of monitoring and control is thus that they prevent the reaping of efficiency gains from specialization. In contrast, the costs of autonomy are that lack of monitoring and control gives employees more opportunity to shirk. If employees have complete autonomy, there is no formal mechanism that ensures that employees act in the best interest of their employer or prevents employees from pursuing their own interests at the expense of their employers' interest. The benefits of monitoring and control are that they help reduce employee shirking.

Trustworthiness matters because it changes the balance between the costs and benefits of autonomy versus control. If a principal can trust the agent to look after the principal's interests and not to shirk, there is simply less need for monitoring and control so that autonomy can increase, allowing for more efficiency gains from specialization. Vice versa, the costs of autonomy are higher—and, hence, the gains from control higher—in case an employee cannot be relied upon to work diligently, absent any formal mechanism for ensuring cooperation. The degree to which specific employees are honest and can be relied upon is not typically known to an employer, however. Trustworthiness is a characteristically unobservable trait, meaning that employers need to rely on signals or information from group-level traits to make inferences about employees' trustworthiness (Arrow 1973; Phelps 1972; Spence 1974). These inferences result in differentiation between employees and are taken into account in the decision of how much autonomy to grant to specific employees. In practice, there can be many signals or traits that employers can draw on to infer trustworthiness. Hence, my generic proposition that

individuals recognized to belong to social groups with positive/negative images concerning their honesty and reliability are deemed more/less trustworthy and have more/less job autonomy.

### *B. Empirical Approach*

Empirical testing of the above proposition requires a research context that involves multiple social groups as well as the possibility of identifying a group-level trait that would allow employers to infer differences in trustworthiness and adapt their decision on how much autonomy to grant to specific employees accordingly. The chosen research context for my empirical analysis is immigrants originating from different birth or home countries. The reason for choosing this particular research context is threefold. First, ethno-national background is widely recognized as a powerful basis for social categorization, meaning it is common for an individual to classify other individuals into distinct social groups delineated by, say, nationality or individuals' country of birth (Barth 1969). Second, it is common for people to hold a stereotypical image of particular countries and their inhabitants (Madon et al. 2001; Prothro 1954; Schneider 2005).<sup>2</sup> Finally, the content of such national stereotypes can be traced back to specific country characteristics, for which ample secondary data are available, for instance, countries' economic status (Lee and Fiske 2006).

Following my use of a migrant sample, I operationalize the idea of different social groups in terms of individuals' ethno-national background, specifically their home country. This means that the different social groups considered in my empirical analysis coincide with the different home countries or countries of birth of the individuals in my sample. More critical to my analysis

---

<sup>2</sup> For a popular overview of national stereotypes and corresponding graphical illustrations, see, for instance, <http://www.nationalstereotype.com>.

is the operationalization of the idea of social groups having more positive or negative images concerning their honesty and reliability. As indicated, employers can, in principle, draw on a variety of group-level traits when assessing employees. However, when it comes to assessing trustworthiness, the degree to which corruption has been institutionalized in an individual's home country would be a most salient trait to base one's inference on. I therefore expect that systematic differences in the level of corruption in migrants' home countries give rise to systematic differences in inferred trustworthiness and thus to clear patterns of job autonomy differentials between various migrant groups. Concretely, the empirical analysis below tests the following hypothesis: *The higher the level of corruption in a migrant's home country, the less job autonomy this migrant has in his/her host country.*

## **II. Data and Method**

Data for my analysis come from the European Social Survey or ESS (Jowell and Central Co-ordinating Team 2007), supplemented with cross-country data from the Worldwide Governance Indicators or WGI project (World Bank 2016), among others. The ESS is a bi-annual survey of nationally representative samples from 32 mostly European countries, as well as such countries as Israel, Turkey and Russia. Following my interest in inferences based on group-level traits and corresponding research context, I use only a portion of all respondents in the ESS, namely those respondents that currently live in a country other than their home country, meaning a country other than the country in which they are born. Foreign-borns from a particular home country or country of birth living in a particular host country are typically migrants, which have been extensively studied using data from the ESS (e.g., Alesina and Giuliano 2011; Bisin et al. 2011). In addition, I do not consider respondents that are self-employed or working for their

own (family) business, as these individuals are typically themselves employers rather than employees. Finally, I do not consider the subset of individuals that are not living in their birth country, but at the same time are living in the birth country of their parents. An example would be a child born abroad during an extended holiday. Excluding respondents with missing data on the variables considered in the analysis leaves a sample of 9,150 individuals from 157 home countries. Table 1 presents descriptive statistics for this sample and a selection of variables used in the analysis. Table A.1 in the appendix presents an overview of the home countries in the sample, sorted by number of respondents.

#### A. Variables

*Dependent Variable*—The dependent variable in my analysis is the amount of autonomy an individual experiences at his/her job. As a key feature of workplace organization, much effort has been devoted to measuring job autonomy, particularly by business and management scholars. The standard approach is to use surveys, asking respondents to rate their own autonomy (Breugh 1985; Hackman and Oldham 1975). I use this standard approach, which has the advantage of eliciting a broad assessment that transcends externally coded specifics of employees' responsibilities or decision rights in narrow operational domains. The wording of the job autonomy item included in the ESS is as follows: "Please say how much the management at your work allows/allowed you to decide how your own daily work is/was *organised*?" And the accompanying answering scale ranges from 0 ("I have/had no influence") to 10 ("I have/had complete control"). To keep things simple and facilitate interpretation of the results, for my main analyses, I assume that job autonomy is measured on a cardinal scale. However, as a robustness check I also present results obtained using ordered probit estimation. Importantly, subjective job

autonomy indicators of the type included in the ESS, and the ESS survey item in particular, have been widely validated (Breugh 1985; Morgeson and Humphrey 2006; Van Hoorn 2014). Table A.2 in the appendix presents some further stylized evidence on the construct validity of the ESS job autonomy item, particularly on the relationship between measured job autonomy and other features of an individual's job. If the ESS job autonomy measure is valid, we expect, for instance, a positive relation between the non-routineness of work and job autonomy and clear differences in job autonomy between the self-employed and ordinary employees, which is confirmed by the evidence. To test the robustness of my results, I also consider an alternative indicator that is closely related to my main indicator but more narrowly focused on one specific feature of job autonomy. The item used to measure this alternative indicator asks respondents to describe their current job, specifically whether they can decide the time at which they start and finish work. The item includes four possible answer categories: 1, Not at all true; 2, A little true; 3, Quite true; and 4, Very true. As this item has only been included in Waves 2 and 5 of the ESS, using this job autonomy indicator reduces the size of the sample to 1,835 individuals from 129 home countries.

*Main Independent Variable*—My main independent variable is the degree to which corruption is institutionalized in the home countries of the migrants in my sample. The specific measure that I use is the Control of Corruption measure from the WGI project, which captures “perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests” (Kaufmann et al. 2009: 6). I recode this measure so that higher scores indicate higher levels of corruption in the home country. The WGI project has collected cross-country data bi-annually since 1996 and annually since 2002. A priori, however, it is not clear that one particular

year of observation is more representative of former residents of a country that have migrated abroad than another year. I thus calculate the average corruption level in the home country over the years covered by the ESS, 2002-2012. However, to rule out that my results are sensitive to the period chosen, I repeat my baseline analyses replacing this measure of the degree to which corruption is institutionalized in individuals' home country with a measure of home-country corruption based on averages over the years prior to 2002 (1996, 1998 and 2000).

*Control Variables*—Although the goal of my analysis is not to give a full account of individual-level differences in job autonomy, the empirical models that I estimate include a range of control variables. The most basic set of control variables that I include are year/wave dummies, standard demographic characteristics (age, age squared, and sex) and dummies for employment status (whether the individual is currently in paid work, unemployed and looking for work, unemployed and not looking for work, retired, et cetera). Inclusion of home-country dummies further controls for direct effects of host-country environment on job autonomy and helps rule out that a negative relationship between home-country corruption and job autonomy is due to a sorting effect of individuals from relatively corrupt home countries migrating to host countries with relatively low levels of job autonomy. Other factors that I control for are differences in total number of hours normally worked in a week and differences in educational background, specifically the total number of years of fulltime education that an individual has and the highest education level achieved as measured by the International Standard Classification of Education (e.g., “less than lower secondary,” “lower secondary,” or “higher tertiary education”). Given that my sample consists of people that are living abroad as migrants, I further control for time spent in the host country (five years or less; six to 10 years; 11 to 20 years; more than 20 years) and the language spoken at home, specifically whether the language of the host



country is also the main language spoken at home or not (1=yes; 0=no).

<Insert Table 1 about here>

To complete my standard set of control variables I include several measures of characteristics of the home-host country dyad to which an individual belongs (see Van Hoorn, 2016). Specifically, I add three dummy variables to control for three features of the relationship between the home and the host country of the individual. The first dummy variable captures whether the host country has the same official language as the home country has (1=yes; 0=no). The second dummy variable captures whether the host country is a former colonizer of the home country (1=yes; 0=no). The third dummy variable captures whether the home and the host country are contiguous (1=yes; 0=no). Data for these dyadic measures come from the famous CEPII GeoDist database (Mayer and Zignago 2011).

Complementing the above set of possible confounders, for my robustness checks I consider five additional control variables that speak to possible alternative explanations for an effect of home-country corruption on migrant employees' job autonomy. The first of these variables concerns individuals' income. The ESS asks respondents about the total net income of their household and classifies their answer on a scale depicting different income brackets. In its first three waves (2002-2006), the ESS used a 12-point scale, while the last three waves used a 10-point scale. To ensure that measured income is comparable over time and across respondents from different countries, I follow Van Hoorn (2016) and recode answers to create a measure of rank income. Hence, for each respondent, I calculate their income percentile relative to respondents from the same country surveyed in the same year/wave.

The second additional control variable that I consider is individuals' self-reported happiness. The ESS measures individuals' happiness using the following item: "Taking all things together, how happy would you say you are?" Respondents can answer on a Likert-type scale that ranges from 0, "extremely unhappy" to 10, "extremely happy."

The third additional control variable is actually a set of two variables that captures individuals' preferences or values. Values speak to people's deepest motivations, the importance they attach to certain objectives compared to other objectives, and provide cross-situational guidance to individuals when selecting between alternative courses of action or states of affairs (Rohan 2000). The personal values that I consider derive from the framework of universal human values developed by Shalom Schwartz and collaborators (Schwartz 1992; Schwartz and Bilsky 1987, 1990), which is the standard values framework in psychology. Specifically, I consider the two-overarching values dimensions in this framework, so-called openness-to-change versus conservation values and self-transcendence versus self-enhancement values. A high score on openness-to-change versus conservation indicates that an individual attaches relatively much value to hedonism, stimulation and self-direction and relatively little value to tradition, conformity and security. A high score on self-transcendence versus self-enhancement indicates that an individual attaches relatively much value to universalism and benevolence and relatively little value to power and achievement. Details on the ESS items—21 in total—and the procedure used to measure these two values dimensions are presented in Schwartz et al. (2001) and are available on request as well.

The fourth additional control variable concerns the industry in which respondents work, specifically the average level of job autonomy in the industry. Across its six waves, the ESS has recorded the industry in which respondents work using different revisions of the ISIC

(International Standard Industrial Classification of All Economic Activities). My measure of average job autonomy involves averaging across each industry thus included and combining the resulting scores in a single industry autonomy measure.

Finally, as the last of the five additional control variables, I consider the level of economic development of migrant employees' home country. The specific measure that I use is GDP per capita, as available from the World Bank World Development Indicators database (World Bank 2015). I follow the same procedure as for measuring home-country corruption, meaning that I calculate the average level of per-capita income in the home country over the years covered by the ESS, 2002-2012.

## B. Method

To test my hypothesis, I estimate the following model:

$$A_{im} = \beta_0 + \beta_1 C_m + \beta_2 X_{im} + \varepsilon_{im} . \quad (1)$$

In this model  $A_{im}$  indicates the amount of job autonomy granted to individual  $i$  that is born in home country  $m$ ,  $C_m$  denotes the degree to which corruption is institutionalized in the individual's home country,  $X_{im}$  is a set of control variables (year/wave fixed effects, host country fixed effects, age, gender, et cetera) and  $\varepsilon_{im}$  is a random error term. My hypothesis is confirmed if the coefficient for home-country corruption ( $\beta_1$ ) is statistically significantly negative.

I estimate Equation 1 using OLS, implicitly assuming that job autonomy is measured on a cardinal scale. However, as mentioned above, my results may be sensitive to the assumption of cardinality so that I also present results using ordered probit estimation. More importantly, my

data are clustered with individuals nested in home countries, meaning that for all models I use robust standard errors that are clustered at the home-country level. Finally, the home-country subsamples in my analysis have highly unequal size with some subsamples containing very few individual observations. Hence, to assess the robustness of my baseline results, I also check whether I obtain similar results when considering only home-country subsamples with a pre-specified minimum number of individual observations.

### **III. Results**

#### *A. Baseline Results*

To start, I test how much variation in job autonomy occurs between different home countries compared to between individuals from the same home country. Variance components analysis finds that 6.04% (95% CI: 4.28%-8.31%) of total variation in job autonomy occurs between home countries instead of between individuals within their respective home countries. Hence, specific features of individuals' home country indeed seem to have a significant influence on how much autonomy these individuals are granted by their employers, even though substantial individual-level heterogeneity exists as well (cf. Table A.1 in the appendix).

<Insert Table 2 about here>

Table 2 presents the results of my baseline analysis. Confirming my hypothesis, results reveal a strong, statistically highly significant negative correlation between home-country corruption and the amount of job autonomy an individual has (Model 2). Moreover, the effect of home-country corruption on foreign-born employees' job autonomy appears quite large. Adding

home-country corruption as a predictor can increase variance explained by more than 1.5 percentage points (Model 2 versus Model 1). Inclusion of some further control variables such as years of education or time spent in the host country lowers the coefficient for home-country corruption but the relationship is still highly statistically significant (Models 3 and 4). Moreover, the effect of home-country corruption remains quite large when compared to the effects of some other predictors of job autonomy. The effect of a one standard deviation decrease in home-country corruption is roughly equal to the effect of using the host-country language as the main language at home, for instance. Similarly, the effect of a one standard deviation increase/decrease in home-country corruption is not substantially smaller than the effect of a one standard deviation increase/decrease in years of education (Models 3 and 4).

#### *B. Robustness Checks*

*Omitted Variable Bias and Alternative Explanations*—Although the models estimated above control for such factors as years of education, language spoken and time spent in the host country, the main concern with my baseline results is the possibility of an omitted variable bias. Hence, for my first set of robustness checks I seek to reduce the potential for a spurious correlation between home-country corruption and job autonomy by controlling for a variety of additional factors that might correlate with both these variables and could offer an alternative explanation for the observed relationship between home-country corruption and job autonomy. The additional control variables that I consider are individuals' income, self-reported happiness, personal values, average job autonomy in the industry, and home-country level of economic development (see above). The rationale for including each of these five variables is as follows.

First, following the standard signaling perspective and theories of statistical

discrimination (Arrow 1973; Spence 1974), there is a concern that home-country corruption does not inform employers about individuals' trustworthiness but about some other unobservable factor that would be taken into account by any employer deciding on how much autonomy to grant to a particular employee. The most prominent such unobserved factor would be an employee's ability, which, in turn, may affect job autonomy because the specialization and efficiency benefits of delegation and autonomy are greater, the more able the employee is. Accordingly, I include income—specifically income rank (see above)—as an additional variable that proxies for an unobserved ability factor (Van Hoorn 2016). During their employment reign, employers can get a clear sense of employees' skills and capabilities and adjust their wages accordingly, making individuals' income a powerful proxy for their ability. If the negative relationship between corruption and job autonomy continues to hold with personal income rank controlled for, it seems unlikely that unobserved systematic differences in ability or skills between individuals from different home countries account for this relationship.

Second, there is a concern that both the measure of home-country corruption and the measure of job autonomy might be affected by the particular way in which individuals born and socialized in certain countries perceive the world. Because of social conventions or cultural norms, individuals may exhibit an upward or downward bias when asked to evaluate and score either their own lives or the environment in which they are living. Following Van Hoorn (2016), I include self-reported happiness as an additional control variable to address this contingency, as this variable seems most influenced by such differences in response style. If differences in response style, specifically the tendency to be overly negative or overly positive when making a subjective evaluation, truly explain the relationship between home-country corruption and job autonomy, I expect this relationship to vanish when self-reported happiness is controlled for. If

the effect of home-country corruption on job autonomy remains with self-reported happiness controlled for, it seems unlikely that the found relationship between corruption and job autonomy is spurious, driven by systematic differences in response style.

Third, personal values concern individuals' deepest motivations and preferences, which, in turn, can affect how much job autonomy people end up having. So far, I have grounded my analysis in the idea that employers rely on specific signals of (un)trustworthiness when deciding how much job autonomy to grant to an employee, particularly to employees from different home countries. This perspective is one-sided, however, as it neglects the possibility that individuals from different home countries may simply have different value preferences, meaning that individuals born in certain countries attach much less value to job autonomy than individuals from other home countries do. If people from home countries in which corruption is more institutionalized also care less about job autonomy, the effect of home-country corruption on job autonomy could be spurious, reflecting a simple difference in preferences rather than a process of employers relying on signals of trustworthiness to determine how much autonomy to grant to specific employees. Controlling for differences in personal values—specifically individuals' scores on the two overarching values dimensions in the standard framework of universal human values (Schwartz 1992)—enables me to rule out such a preference-based explanation for the observed relationship between home-country corruption and job autonomy.

Fourth, the average level of job autonomy in an industry reflects the nature of a job, independent from specific features of one's home country giving rise to differential managerial treatment. My analysis focuses on the direct effect of inferred trustworthiness on the amount of autonomy that an employer grants to different employees. Alternatively, inferred trustworthiness may influence recruitment, as when only employees that are deemed trustworthy are hired to

work in high-autonomy industries, while employees that are deemed (relatively) untrustworthy end up working in low-autonomy industries. If so, home-country corruption may affect individuals' autonomy via inferred trustworthiness, but through a different channel than is the focus of this paper. Controlling for average job autonomy in individuals' industry allows me to check whether the observed relationship between home-country corruption and job autonomy is perhaps due to such an indirect selection effect or due to the direct effect emphasized in this paper.

Fifth and finally, there is a possible concern that home-country corruption correlates with other home-country characteristics that employers are likely to take into account when deciding on how much autonomy to grant to an employee. Van Hoorn (2016), for instance, finds that employers grant more autonomy to individuals from more economically advanced home countries because these individuals appear more competent and would therefore benefit more from having autonomy at work than individuals from less advanced economies would. If so, the corruption-autonomy relationship found in my baseline analysis may be spurious, reflecting the autonomy effect of home-country economic development, which, in turn, correlates with home-country level of corruption. However, if the relationship between home-country corruption and autonomy remains with home-country economic development controlled for, it seems likely that host-country corruption indeed acts as a signal of (un)trustworthiness that employers rely on when deciding how much autonomy to grant to specific groups of employees.

Although each of these five additional control variables speak to potential omitted variables and alternative explanations for the found effect of home-country corruption on job autonomy, to complete the above discussion let me note that there are strong arguments against considering these variables as control variables. Specifically, the concern is that inclusion of



these variables increases the risk of a Type II error (which, in turn, provides a powerful rationale for not considering these variables as part of my initial analyses, but only as a strict check of the robustness of the corruption-autonomy relation uncovered in the baseline analysis). This risk appears particularly prominent in case of personal income and self-reported happiness, as these variables are also outcome variables in their own right. Indeed, it seems likely that a process highly similar to the process by which decision makers are led to grant more job autonomy to individuals from some home countries than to individuals from other home countries also affects migrants' personal income or subjective well-being (Van Hoorn 2016).<sup>3</sup> For the other three additional control variables, this problem would be less relevant. Still, though, corruption is likely to have a causal effect on economic development, which could mean that controlling for home-country economic development dilutes the variation in job autonomy that is attributed to home-country corruption. Similarly, personal values are strongly affected by the culture of one's home country, including such dimensions of culture as power distance that are known to be

---

<sup>3</sup> Job autonomy could even be a mediator in that home-country corruption has a negative effect on individuals' income partly because individuals are granted less autonomy at work, which, in turn, limits their ability to make optimal use of their unique experience and tacit skills and knowhow. Similarly, migrants from home countries in which corruption is more pervasive have less job autonomy compared to immigrants from home countries in which corruption is more pervasive may end up less happy because having relatively little autonomy at work makes their jobs less pleasant and interesting. Lang and Lehmann (2012) survey the literature on ethnicity-based income differentials.

related to corruption (Hofstede 2001; Licht et al. 2007).<sup>4</sup> Finally, I should note that, while personal income and home-country development might proxy for an unobserved ability factor, honesty and reliability are probably chief among the qualities captured in such a broad measure of individuals' ability.<sup>5</sup> Overall, I thus deem it wise to warn explicitly that controlling for such factors as individuals' income or self-reported happiness can help limit potential biases due to omitted variables and rule out alternative explanations for my findings, but that the coefficients for home-country corruption obtained with these control variables included are likely to end up having a downward bias.

<Insert Table 3 about here>

This being said, Table 3 presents the results for the analyses including individuals' income, self-reported happiness, personal values, average job autonomy in the industry or home-country level of economic development as additional control variables. Consistent with the above arguments, most of the five additional variables are statistically significant correlates of job autonomy. Income rank, for instance, correlates strongly positively with job autonomy,

---

<sup>4</sup> For evidence on the cultural component of corruption, which is not reflected in formal governance structures but institutionalized in societal conventions and cultural norms, see Fisman and Miguel (2007).

<sup>5</sup> Given that my analysis already controls for such skill measures as years of education and level of education, I expect honesty and reliability to be even more prominent components of unobserved ability in my analysis than they would be in analyses that include fewer such controls.

which is consistent with the idea that, *ceteris paribus*, individuals with more autonomy at their jobs are able to achieve higher productivity levels and therefore get paid more. Most importantly, however, in all cases, home-country corruption continues to have a statistically highly significant negative effect on job autonomy. Hence, even though controlling for, say, personal income might be inappropriate from a theoretical perspective, my baseline results survive also this very stringent way of assessing the potential spuriousness of and alternative explanations for the found effect of home-country corruption on job autonomy. Effect sizes are clearly smaller than before (cf. Model 4 in Table 2), but this is as expected and of course also consistent with theoretical arguments concerning the direct and indirect effects of home-country corruption on individuals' income, happiness and personal values, among others.

*Minimum Number of Individual Observations per Home-Country Subsample*—As stated, the home-country subsamples in my analysis are of differing size and some home-country subsamples comprise relatively few individual observations. To address this issue and eliminate potential biases, I first repeat my baseline analysis using bootstrapping procedures to obtain estimates for my standard errors. Results using bootstrapping are almost identical to my baseline results (details available on request). However, as the main check of the potential sensitivity of my results to the small size of some of the home-country subsamples, I repeat my baseline analysis excluding home countries that do not have a minimum number of individual observations (cf. Table A.1 in the appendix). In all cases, results are almost exactly the same as my baseline results, showing no sign of biases (Models 11-13 in Table 4).

<Insert Table 4 about here>

*Alternative Dependent and Independent Variables*—As a further robustness check, I consider whether my baseline results are sensitive to the particular dependent and independent variable used. First, I substitute the standard job autonomy measure with a measure of individuals' discretion in setting the time at which they start/finish their work. Results confirm the effect of home-country corruption on job autonomy, even when it concerns employees' discretion in the rather narrow domain of starting and finishing their work on a particular time (Model 14 in Table 4). Results are similarly unaffected when using an alternative measure of home-country corruption, based on data covering the period 1996-2000 instead of the period 2002-2012 (Model 15 in Table 4).

*Alternative Estimation Methods*—As a final robustness check, I consider whether my results are sensitive to the non-cardinal nature of the job autonomy measure. My analyses so far have assumed that job autonomy is in fact measured on a cardinal scale, which, in turn, may have affected my results. However, using ordered probit estimation to account for the scale of the job autonomy measure renders results that are highly similar to results from my baseline analysis (Model 16 in Table 4). Hence, there is no evidence that treating job autonomy as a cardinal measure introduces biases.

#### **IV. Discussion and Conclusion**

This paper has sought to unpack the black box of trust shaping workplace organization. Although the possible role of trust in providing governance to workplace organization is widely recognized, for practical reasons, in empirical studies this idea has been watered down to testing the relationship between a measure of trust as the independent variable and some feature of workplace organization as the dependent variable. Notably, there are several studies showing that

stronger societal trust norms increase the amount of job autonomy that employers grant to their employees, which is an understandable simplification from a practical perspective. As is, we lack insight on the deeper process underlying employers' ultimate trust or autonomy decision, however.

Trust decisions involve not only a willingness to be vulnerable to the actions of the other party but also an assessment of the counterparty's trustworthiness. For my unpacking of the trust-organization nexus, I have analyzed this latter feature of the decision to trust, using job autonomy as the dependent variable. When it comes to trustworthiness and job autonomy, the key challenge that employers face is to make an informed decision about which employees can be trusted with higher amounts of autonomy and which employees need to be monitored and controlled more closely. Prior work, particularly theories of signaling and statistical discrimination, have argued the power of signals in informing decision makers. Similarly, laboratory studies have found that even simple informational cues can affect trustors' behavior in experimental trust games. Building on these bodies of research, I proposed that employers take into account group-level traits as a way of inferring trustworthiness and, ultimately, deciding on how much job autonomy to grant to specific employee groups. I tested this proposition empirically in the context of migrants originating from different home countries and using the degree to which corruption has been institutionalized in these home countries as a signal of individuals' (un)trustworthiness. Specifically, I tested whether immigrants from home countries in which corruption is more pervasive, on average, have less job autonomy compared to immigrants from home countries in which corruption is less pervasive. In a cross-national sample comprising 9,150 migrants from 157 home countries, I found strong support for this hypothesis. Extensive robustness checks ruled out alternative explanations for these findings, for instance,

unobserved skill differences. Overall, this paper contributes important real-world evidence on process-oriented features of trust governing exchange in the context of workplace organization. In addition, the evidence presented in this paper demonstrates how home-country characteristics can be an important determinant of how migrant employees are treated and their ability to integrate successfully in their places of work.

These contributions notwithstanding, there are also several limitations to the analysis presented in this paper. First, this paper has not studied individual employers and their actual trust and autonomy decisions. Rather, this paper has focused on outcomes of trust decisions and patterns in the data consistent with a particular process by which employers decide how much autonomy to grant to specific employees. Accordingly, the analysis remains indirect, which, in turn, leaves more room for confounding influences than, for instance, a laboratory experiment would leave. I do not think that confounding influences do, in fact, bias my results, given the various alternative explanations and control variables considered. Moreover, the indirect approach has some clear advantages over laboratory experiments that focus on individual decision makers, as the results provide direct evidence on individuals' real-world experiences and, as such, do not suffer low external and ecological validity. Laboratory experiments could be helpful, however, for probing deeper in the process of inferring trustworthiness, including analyses of the weight that employers assign to different employee signals and group-level traits.

A second limitation is that the social groups (i.e., migrants from different home countries) and the group-level trait empirically analyzed in this paper have been rather narrow. Although I cannot see any reason why the underlying mechanism of relying on group-level traits to infer trustworthiness would not generalize to other social groups, a logical avenue for future research is to extend the analysis presented here to consider other types of groups in society and other

salient group-level traits.

Finally, it has been beyond the scope of the present analysis to link the evidence on group-level traits shaping employers' decisions of how much autonomy to grant to specific employees to organizational performance. A generic concern with statistical discrimination is that it leads to suboptimal allocation decisions, since a consequence of considering groups as a whole is that specific qualities of some employees remain underappreciated. For job autonomy, we expect the same outcome of many employees being granted less autonomy than would be optimal in terms of maximizing the net sum of efficiency gains due to specialization minus the costs of shirking. However, future work is needed to assess the actual performance consequences of biased managerial treatment on the count of group-level inferences concerning employees' trustworthiness. This paper, then, provides a stepping stone towards studying this and other important features of trust as a provider of governance in the context of workplace organization.

## **Appendix**

<Insert Table A.1 about here>

<Insert Table A.2 about here>

## **References**

- Akcigit, Ufuk, Harun Alp, and Michael Peters. 2016. Lack of Selection and Limits to Delegation: Firm Dynamics in Developing Countries. NBER Working Paper No. 21905.
- Altonji, Joseph G., and Charles R. Pierret. 2001. Employer Learning and Statistical Discrimination. *Quarterly Journal of Economics*, 116: 313-50.
- Arrow, Kenneth J. 1972. Gifts and Exchanges. *Philosophy and Public Affairs*, 1: 343-62.
- Arrow, Kenneth J. 1973. The theory of discrimination. In: Ashenfelter, Orley, and Albert Rees, Eds. *Discrimination in Labor Markets*. Princeton, NJ: Princeton University Press.
- Arrow, Kenneth J. 1974. *The limits of organization*. New York: Norton.
- Barth, Fredrik, Ed. 1969. *Ethnic groups and boundaries: The social organization of culture difference*. Boston: Little Brown and Company.
- Bisin, Alberto, Eleonora Patacchini, Thierry Verdier, and Yves Zenou. 2011. Ethnic identity and labour market outcomes of immigrants in Europe. *Economic Policy*, 26: 57-92.
- Bloom, Nicholas, Raffaella Sadun, and John Van Reenen. 2012. The Organization of Firms Across Countries. *Quarterly Journal of Economics*, 127: 1663-705.
- Breaugh, James A. 1985. The measurement of work autonomy. *Human Relations*, 38: 551-70.
- Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Dasgupta, Partha. 1988. Trust as a commodity. In: Gambetta, Diego, Ed. *Trust: Making and breaking cooperative relations*. Oxford: Basil Blackwell.
- Eckel, Catherine C., and Ragan Petrie. 2011. Face Value. *American Economic Review*, 101: 1497-513.
- Fisman, Raymond, and Edward Miguel. 2007. Corruption, Norms and Legal Enforcement. *Journal of Political Economy*, 115: 1020-48.



- Fukuyama, Francis. 1995. *Trust: The Social Virtues and the Creation of Prosperity*. London: Hamish Hamilton.
- Gambetta, Diego, and Heather Hamill. 2005. *Streetwise: How Taxi Drivers Establish Customer's Trustworthiness*. New York: Russell Sage Foundation.
- Fershtman, Chaim, and Uri Gneezy. 2001. Discrimination in a segmented society: An experimental approach. *Quarterly Journal of Economics*, 116: 351-77.
- Granovetter, Mark. 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91: 481-510.
- Hackman, J. Richard, and Greg R. Oldham. 1975. Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60: 159-70.
- Hardin, Russell. 2002. *Trust and Trustworthiness*. New York: Russell Sage Foundation.
- Hofstede, Geert. 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*. Second edition. Thousand Oaks, CA: Sage.
- Jermier, John M., and Charles E. Michaels. 2001. Autonomy at Work. In: Smelser, Neil J., and Paul B. Baltes, Eds., *International Encyclopedia of Social and Behavioral Sciences*. Oxford: Pergamon.
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2009. Governance matters VIII: Aggregate and individual governance indicators, 1996-2008. World Bank Policy Research Working Paper No. 4978.
- Lang, Kevin, and Jee-Yeon K. Lehmann. 2012. Racial Discrimination in the Labor Market: Theory and Empirics. *Journal of Economic Literature*, 50: 959-1006.
- Lee, Tiane L., and Susan T. Fiske. 2006. Not an outgroup, not yet an ingroup: Immigrants in the stereotype content model. *International Journal of Intercultural Relations*, 30: 751-68.

- Licht, Amir N., Chanan Goldschmidt, and Shalom H. Schwartz. 2007. Culture rules: The foundations of the rule of law and other norms of governance. *Journal of Comparative Economics*, 35: 659-88.
- Mayer, Thierry, and Soledad Zignago. 2011. Notes on CEPII's distances measures: The GeoDist database. Working Papers 2011-25, CEPII research center.
- Madon, Stephanie, Max Guyll, Kathy Aboufadel, Eulices Montiel, Alison Smith, Polly Palumbo, and Lee Jussim. 2001. Ethnic and national stereotypes: The Princeton trilogy revisited and revised. *Personality and Social Psychology Bulletin*, 27: 996-1010.
- McEvily, Bill, Joseph R. Radzevick, and Roberto A. Weber. 2012. Whom do you distrust and how much does it cost? An experiment on the measurement of trust. *Games and Economic Behavior*, 74: 285-98.
- Morgeson, Frederick P., and Stephen E. Humphrey. 2006. The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91: 1321-39.
- North, Douglass C. 1990. *Institutions, institutional change, and economic performance*. New York: Cambridge University Press.
- Phelps, Edmund S. 1972. The statistical theory of racism and sexism. *American Economic Review*, 62: 659-61.
- Prothro, E. Terry. 1954. Cross-cultural patterns of national stereotypes. *Journal of Social Psychology*, 40: 53-9.
- Rohan, Meg J. 2000. A Rose by Any Name? The Values Construct. *Personality and Social Psychology Review*, 4: 255-77.
- Schneider, David J. 2005. *The Psychology of Stereotyping*. New York: Guilford Press.

- Schwartz, Shalom H. 1992. Universals in the content and structure of values: Theory and empirical tests in 20 countries. In: Zanna, Mark P., Ed. *Advances in Experimental Social Psychology*, Volume 25. New York: Academic Press.
- Schwartz, Shalom H., and Wolfgang Bilsky. 1987. Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53: 550-62.
- Schwartz, Shalom H., and Wolfgang Bilsky. 1990. Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology*, 58: 878-91.
- Schwartz, Shalom H., Gila Melech, Arielle Lehmann, Steven Burgess, Mari Harris, and Vicki Owens. 2001. Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, 32: 519-42.
- Spence, A. Michael. 1974. *Market signaling: Informational transfer in hiring and related screening processes*. Cambridge, MA: Harvard University Press.
- Van Hoorn, André. 2014. *Trust, Workplace Organization, and the Comparative Advantage of Nations*. SOM Research Report No. 14024-GEM, University of Groningen.
- Van Hoorn, André. 2016. *How Are Migrant Employees Managed? An Integrated Analysis*. SOM Research Report No. 16001-GEM, University of Groningen.
- Van 't Wout, Mascha, and Alan G. Sanfey. 2008. Friend or foe: The effect of implicit trustworthiness judgments in social decision-making. *Cognition*, 108: 796-803.
- World Bank. 2016. *Worldwide Governance Indicators project, 1996-2014*. <http://www.govindicators.org>.
- World Bank. 2015. *World Development Indicators, 2015*. <http://data.worldbank.org/data-catalog/world-development-indicators>.



Table 1—Descriptive Statistics for Selected Variables

Variable	Mean and standard deviation	
Dependent variable		
Job autonomy (0-10) [n=9,156]	5.45	(3.55)
Decide time start/finish work (1, Not at all true – 4, Very true) [n=1,848]	1.81	(1.06)
Main independent variable		
Home-country corruption level (0-5)	2.38	(1.04)
Selected control variables		
Gender (1=male)	45.3%	(49.8%)
Age in years	47.4	(16.4)
Years of full-time education completed	12.9	(4.35)
Total hours normally worked per week in main job overtime included	39.3	(13.1)
Host-country language spoken at home (1=yes)	60.3%	(48.9%)
Host country has same official language as home country (1=yes)	25.9%	(43.8%)
Host country is former colonizer of home country (1=yes)	23.6%	(42.5%)
Host country is contiguous to home country (1=yes)	30.1%	(45.9%)
Home-country economic development (average GDP per capita in 2005US\$)	13,566	(15,108)
Rank income (percentile)	46.5	(27.7)
Happiness (0-10)	7.19	(2.02)
Openness-to-change versus conservation values (-5,5)	-.395	(1.14)
Self-transcendence versus self-enhancement values (-5,5)	1.24	(1.09)

Notes: Standard deviations in parentheses. Number of observations is 9,618 unless otherwise indicated. Sample covers individuals originating from 157 different home countries.

Table 2—The Effect of Home-Country Corruption on the Job Autonomy of Foreign-Born Individuals

Dependent = Job autonomy	Model 1	Model 2	Model 3	Model 4
Home-country corruption level	-	-.152*** (.014)	-.119*** (.010)	-.102*** (.011)
Gender (1=male)	.005 (.028)	.016 (.028)	.005 (.025)	.010 (.024)
Years of education	-	-	.134*** (.016)	.133*** (.017)
Hours worked per week	-	-	.060*** (.008)	.060*** (.009)
Host-country language spoken at home (1=yes)	-	-	-	.090*** (.024)
Host country has same official language as home country (1=yes)	-	-	-	.071* (.036)
Host country is former colonizer of home country (1=yes)	-	-	-	.001 (.033)
Host country neighbors home country (1=yes)	-	-	-	.002 (.032)
Dummies for time spent in host country	No	No	No	Yes
Dummies for education level	No	No	Yes	Yes
Dummies for employment status	Yes	Yes	Yes	Yes
Age and age squared	Yes	Yes	Yes	Yes
Host-country dummies	Yes	Yes	Yes	Yes
Year/wave dummies	Yes	Yes	Yes	Yes
No. of observations	9,150	9,150	9,150	9,150
No. of home countries	157	157	157	157
R <sup>2</sup>	.0999	.1154	.1796	.1854

Notes: All continuous measures (dependent and independent variables) are standardized to have a mean of 0 and a standard deviation of 1. Standard errors (in parentheses) are robust standard errors that are clustered at the home-country level. \*, \*\*, \*\*\* denotes statistical significance at the 10%, 5% and 1% level.

Table 3—Results with Additional Control Variables

Dependent = Job autonomy	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Home-country corruption level	-.087*** (.010)	-.095*** (.011)	-.081*** (.010)	-.095*** (.011)	-.094*** (.018)	-.056*** (.016)
Income rank	.107*** (.012)	-	-	-	-	.089*** (.011)
Self-reported happiness	-	.089*** (.010)	-	-	-	.075*** (.011)
Self-transcendence versus self-enhancement values	-	-	.014 (.013)	-	-	.005 (.013)
Openness-to-change versus conservation values	-	-	.128*** (.010)	-	-	.122*** (.010)
Average job autonomy in industry	-	-	-	.126*** (.010)	-	.121*** (.009)
Home-country economic development (log of per-capita GDP)	-	-	-	-	.010 (.016)	-.000 (.016)
Standard control variables	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	9,150	9,150	9,150	9,150	9,150	9,150
No. of home countries	157	157	157	157	157	157
R <sup>2</sup>	.1942	.1922	.1977	.1988	.1854	.2232

Notes: See Table 2. All continuous measures (dependent and independent variables) are standardized to have a mean of 0 and a standard deviation of 1. Standard errors (in parentheses) are robust standard errors that are clustered at the home-country level. Standard control variables are gender, age and age squared, dummies for employment status, years of education, dummies for education level, hours worked per week, dummy for host-country language spoken at home, dummy for home and host country having same official language, dummy for home and host country having past colonial relationship, dummy for home and host country contiguity, host-country dummies, and year/wave dummies. \*, \*\*, \*\*\* denotes statistical significance at the 10%, 5% and 1% level.

Table 4—Robustness Checks Using Minimum Home-Country Subsample Size and Alternative Variables and Estimation Method

	Minimum number of individual observations per home-country subsample			Alternative dependent variable: Decide time start/finish work Model 14	Alternative independent variable Model 15	Alternative estimation method: Ordered probit Model 16
	Minimum 2	Minimum 10	Minimum 50			
	Model 11	Model 12	Model 13			
Home-country corruption level	-.103*** (.011)	-.104*** (.011)	-.110*** (.011)	-.075** (.030)	-	-.113*** (.013)
Home-country corruption between 1996 & 2000	-	-	-	-	-.100*** (.012)	-
Standard control variables	Yes	Yes	Yes	Yes	Yes	Yes
Dependent variable standardized	Yes	Yes	Yes	Yes	Yes	No, original 0-10 scale
No. of observations	9,135	8,920	7,703	1,848	9,138	9,150
No. of home countries	142	98	48	132	154	157
R <sup>2</sup>	.1851	.1855	.1879	.1580	.1851	-
Pseudo R <sup>2</sup>	-	-	-	-	-	.0399

Notes: See Table 2. Home-country corruption is standardized to have a mean of 0 and a standard deviation of 1. Standard errors (in parentheses) are robust standard errors that are clustered at the home-country level. Standard control variables are gender, age and age squared, dummies for employment status, years of education, dummies for education level, hours worked per week, dummy for host-country language spoken at home, dummy for home and host country having same official language, dummy for home and host country having past colonial relationship, dummy for home and host country contiguity, host-country dummies, and year/wave dummies. \*, \*\*, \*\*\* denotes statistical significance at the 10%, 5% and 1% level.



Table A.1—Home Countries in the Sample

Home country	Average job autonomy in host country (0-10)		Home-country corruption (0-5)	No. of individual observations
Russia	4.97	(3.71)	3.43	1,068
Germany	6.77	(3.12)	0.70	466
Poland	4.93	(3.57)	2.17	431
Morocco	5.35	(3.67)	2.79	350
Bosnia and Herzegovina	4.84	(3.54)	2.82	347
Romania	5.07	(3.74)	2.73	303
Turkey	4.53	(3.56)	2.56	299
Ukraine	5.41	(3.42)	3.38	294
Italy	5.51	(3.65)	2.22	275
France	6.81	(3.19)	1.10	261
Portugal	4.82	(3.71)	1.45	255
United Kingdom	6.28	(3.07)	0.72	242
Finland	7.25	(2.80)	0.12	189
Albania	2.11	(2.91)	3.17	144
Croatia	5.83	(3.56)	2.44	143
Kazakhstan	3.85	(3.38)	3.46	131
Belarus	4.67	(3.73)	3.21	129
India	6.31	(2.76)	2.95	127
Netherlands	7.20	(3.00)	0.38	116
Iran	5.65	(3.27)	3.10	115
Spain	6.43	(3.22)	1.35	115
Algeria	5.47	(3.49)	3.07	114
Iraq	5.29	(3.62)	3.90	112
Slovak Republic	4.50	(3.62)	2.24	94
Czech Republic	5.87	(3.42)	2.18	90
Austria	6.46	(3.39)	0.64	87
Bulgaria	4.51	(3.74)	2.65	83
Brazil	5.14	(3.48)	2.53	81
United States	6.86	(3.33)	1.01	81
Ireland	6.17	(2.95)	0.91	76
Hungary	6.56	(3.33)	2.03	71
Pakistan	4.94	(3.34)	3.44	70
Sweden	7.33	(2.70)	0.27	70
Tunisia	5.22	(3.79)	2.49	69
Denmark	7.43	(2.60)	0.05	63
Suriname	5.75	(3.19)	2.62	63
Belgium	6.90	(2.96)	1.10	62
Georgia	4.20	(3.92)	2.81	61
Uzbekistan	5.26	(3.71)	3.59	61
Ecuador	5.80	(3.34)	3.31	60
Latvia	5.00	(3.03)	2.34	60
Indonesia	5.68	(3.26)	3.29	57
Lithuania	5.04	(3.40)	2.32	57

Table A.1—Ctd.

Home country	Average job autonomy in host country (0-10)		Home-country corruption (0-5)	No. of individual observations
Philippines	5.60	(3.34)	3.16	57
Argentina	6.13	(3.21)	2.95	56
Macedonia FYR	4.80	(3.66)	2.82	51
Nigeria	4.42	(3.34)	3.61	50
Moldova	5.09	(3.28)	3.20	47
Colombia	5.50	(3.59)	2.74	46
Sri Lanka	4.64	(3.55)	2.76	45
Ethiopia	5.77	(3.13)	3.18	43
Greece	4.67	(3.94)	2.33	43
Norway	7.55	(2.44)	0.43	42
Chile	5.79	(3.25)	1.08	39
Estonia	6.10	(3.14)	1.61	39
Peru	6.21	(3.35)	2.78	39
Syria	4.87	(3.87)	3.39	39
South Africa	5.97	(3.33)	2.25	38
Vietnam	4.97	(3.61)	3.14	38
Angola	4.44	(3.33)	3.80	36
Egypt.	5.15	(4.19)	3.05	34
Lebanon	5.44	(3.78)	3.24	34
Cape Verde	4.82	(3.39)	1.89	33
China	4.88	(3.12)	3.05	32
Congo, Republic	4.35	(3.77)	3.54	31
Thailand	5.74	(3.66)	2.78	31
Yemen	4.90	(3.84)	3.43	30
Azerbaijan	3.79	(3.31)	3.56	29
Armenia	4.35	(3.24)	3.11	26
Afghanistan	5.09	(3.93)	4.01	22
Congo, Democratic Republic	5.14	(3.48)	3.86	22
Kenya	7.38	(2.38)	3.45	21
Kyrgyzstan	4.62	(3.87)	3.61	21
Bolivia	5.60	(3.22)	3.12	20
Jamaica	6.05	(3.78)	2.95	20
Canada	6.32	(3.40)	0.51	19
Ghana	5.74	(2.49)	2.60	19
Libya	3.63	(3.64)	3.54	19
Australia	7.82	(2.72)	0.49	17
Mauritius	6.24	(3.54)	2.00	17
Slovenia	4.88	(3.37)	1.59	17
Switzerland	8.06	(2.25)	0.39	17
Iceland	7.20	(2.68)	0.32	15
Senegal	3.60	(3.54)	2.82	15
Uruguay	6.00	(3.68)	1.42	15
Cuba	4.79	(3.24)	2.18	14

Table A.1—Ctd.

Home country	Average job autonomy in host country (0-10)		Home-country corruption (0-5)	No. of individual observations
Eritrea	4.50	(3.59)	2.82	14
Tajikistan	4.79	(2.81)	3.58	14
Korea, Rep.	6.54	(2.90)	2.06	13
Bangladesh	5.00	(2.86)	3.67	12
Cameroon	5.00	(3.62)	3.53	12
Paraguay	4.83	(3.41)	3.60	12
Venezuela	5.08	(3.00)	3.57	12
Dominican Republic	5.27	(3.47)	3.15	11
Côte d'Ivoire	5.00	(2.58)	3.56	10
Cyprus	5.20	(4.44)	1.43	10
Japan	4.60	(4.12)	1.19	10
Uganda	4.00	(2.94)	3.35	10
Madagascar	7.33	(2.92)	2.65	9
Mexico	6.78	(2.05)	2.79	9
Malaysia	6.88	(2.64)	2.29	8
Mozambique	6.50	(3.07)	3.01	8
New Zealand	5.88	(3.60)	0.14	8
Tanzania	6.00	(2.67)	3.08	8
Zimbabwe	6.00	(3.12)	3.80	8
Cambodia	5.86	(2.12)	3.62	7
Greenland	5.57	(3.87)	1.30	7
Israel	8.00	(2.58)	1.62	7
Nepal	5.43	(2.64)	3.14	7
Rwanda	4.43	(3.87)	2.56	7
Singapore	6.86	(2.67)	0.26	7
Sudan	4.14	(3.34)	3.79	7
Gambia	3.00	(2.76)	3.10	6
Guinea	5.00	(4.29)	3.50	6
São Tomé and Príncipe	4.67	(4.27)	2.99	6
Togo	5.67	(3.67)	3.44	6
Honduras	3.40	(4.77)	3.33	5
Hong Kong (SAR China)	5.80	(3.11)	0.63	5
Jordan	7.80	(1.79)	2.29	5
Aruba	7.50	(1.73)	1.30	4
Burundi	7.00	(3.56)	3.57	4
El Salvador	3.25	(3.59)	2.84	4
Guatemala	3.50	(3.51)	3.08	4
Lao	3.50	(4.51)	3.71	4
Turkmenistan	8.25	(1.50)	3.88	4
Brunei Darussalam	5.33	(4.73)	1.98	3
Burkina Faso	7.00	(2.00)	2.77	3
Guinea-Bissau	6.00	(3.46)	3.57	3
Guyana	4.67	(4.62)	3.06	3

Table A.1—Ctd.

Home country	Average job autonomy in host country (0-10)		Home-country corruption (0-5)	No. of individual observations
Haiti	4.33	(5.13)	3.88	3
Kuwait	4.00	(4.36)	1.94	3
Maldives	8.00	(2.00)	2.95	3
Nicaragua	7.67	(2.52)	3.14	3
Saudi Arabia	6.00	(3.46)	2.63	3
Trinidad and Tobago	8.00	(1.00)	2.72	3
Zambia	8.33	(1.53)	3.12	3
Benin	5.50	(2.12)	3.18	2
Chad	0.50	(0.71)	3.79	2
Comoros	1.00	(1.41)	3.26	2
Grenada	9.50	(0.71)	1.99	2
Macao (SAR China)	3.50	(4.95)	2.00	2
Malta	9.00	(0.00)	1.57	2
Belize	0		2.72	1
Dominica	0		1.84	1
Equatorial Guinea	5		4.03	1
Gabon	8		3.25	1
Liberia	7		3.27	1
Luxembourg	9		0.54	1
Mongolia	5		3.02	1
Namibia	8		2.27	1
Niger	10		3.28	1
Panama	7		2.82	1
Papua New Guinea	8		3.64	1
Puerto Rico	9		1.71	1
St. Kitts And Nevis	5		1.69	1
Timor-Leste	6		3.32	1
United Arab Emirates	1		1.44	1

Notes: Standard deviations in parentheses.

Table A.2—Construct Validity of the Job Autonomy Measure

Description of construct related to job autonomy	Average job autonomy (0-10)		
Current job: can decide time start/finish work			
1 Not at all true	4.96	(SD=3.49)	[n=21,113]
2 A little true	6.43	(SD=2.91)	[n=7,899]
3 Quite true	7.39	(SD=2.57)	[n=5,547]
4 Very true	8.23	(SD=2.45)	[n=4,549]
Current job: there is a lot of variety in my work			
Very true	7.19	(SD=3.03)	[n=12,754]
Quite true	6.16	(SD=3.15)	[n=13,259]
A little true	4.94	(SD=3.30)	[n=9,382]
Not at all true	3.82	(SD=3.62)	[n=3,752]
Current job: health/safety at risk because of work			
Very true	5.21	(SD=3.69)	[n=2,942]
Quite true	5.23	(SD=3.45)	[n=5,091]
A little true	5.84	(SD=3.31)	[n=11,497]
Not at all true	6.39	(SD=3.28)	[n=19,433]
Employment relation			
Self-employed	9.14	(SD=1.95)	[n=23,946]
Employee	5.52	(SD=3.52)	[n=206,853]
Working for own family business	7.96	(SD=2.81)	[n=3,454]

Notes: Standard deviations in parentheses. Number of observations in square brackets. Source is author's own calculations based on data from Waves 1-6 of the European Social Survey (ESS).



## List of research reports

12001-HRM&OB: Veltrop, D.B., C.L.M. Hermes, T.J.B.M. Postma and J. de Haan, A Tale of Two Factions: Exploring the Relationship between Factional Faultlines and Conflict Management in Pension Fund Boards

12002-EEF: Angelini, V. and J.O. Mierau, Social and Economic Aspects of Childhood Health: Evidence from Western-Europe

12003-Other: Valkenhoef, G.H.M. van, T. Tervonen, E.O. de Brock and H. Hillege, Clinical trials information in drug development and regulation: existing systems and standards

12004-EEF: Toolsema, L.A. and M.A. Allers, Welfare financing: Grant allocation and efficiency

12005-EEF: Boonman, T.M., J.P.A.M. Jacobs and G.H. Kuper, The Global Financial Crisis and currency crises in Latin America

12006-EEF: Kuper, G.H. and E. Sterken, Participation and Performance at the London 2012 Olympics

12007-Other: Zhao, J., G.H.M. van Valkenhoef, E.O. de Brock and H. Hillege, ADDIS: an automated way to do network meta-analysis

12008-GEM: Hoorn, A.A.J. van, Individualism and the cultural roots of management practices

12009-EEF: Dungey, M., J.P.A.M. Jacobs, J. Tian and S. van Norden, On trend-cycle decomposition and data revision

12010-EEF: Jong-A-Pin, R., J-E. Sturm and J. de Haan, Using real-time data to test for political budget cycles

12011-EEF: Samarina, A., Monetary targeting and financial system characteristics: An empirical analysis

12012-EEF: Alessie, R., V. Angelini and P. van Santen, Pension wealth and household savings in Europe: Evidence from SHARELIFE

13001-EEF: Kuper, G.H. and M. Mulder, Cross-border infrastructure constraints, regulatory measures and economic integration of the Dutch – German gas market

13002-EEF: Klein Goldewijk, G.M. and J.P.A.M. Jacobs, The relation between stature and long bone length in the Roman Empire

13003-EEF: Mulder, M. and L. Schoonbeek, Decomposing changes in competition in the Dutch electricity market through the Residual Supply Index

13004-EEF: Kuper, G.H. and M. Mulder, Cross-border constraints, institutional changes and integration of the Dutch – German gas market



- 13005-EEF: Wiese, R., Do political or economic factors drive healthcare financing privatisations? Empirical evidence from OECD countries
- 13006-EEF: Elhorst, J.P., P. Heijnen, A. Samarina and J.P.A.M. Jacobs, State transfers at different moments in time: A spatial probit approach
- 13007-EEF: Mierau, J.O., The activity and lethality of militant groups: Ideology, capacity, and environment
- 13008-EEF: Dijkstra, P.T., M.A. Haan and M. Mulder, The effect of industry structure and yardstick design on strategic behavior with yardstick competition: an experimental study
- 13009-GEM: Hoorn, A.A.J. van, Values of financial services professionals and the global financial crisis as a crisis of ethics
- 13010-EEF: Boonman, T.M., Sovereign defaults, business cycles and economic growth in Latin America, 1870-2012
- 13011-EEF: He, X., J.P.A.M Jacobs, G.H. Kuper and J.E. Ligthart, On the impact of the global financial crisis on the euro area
- 13012-GEM: Hoorn, A.A.J. van, Generational shifts in managerial values and the coming of a global business culture
- 13013-EEF: Samarina, A. and J.E. Sturm, Factors leading to inflation targeting – The impact of adoption
- 13014-EEF: Allers, M.A. and E. Merkus, Soft budget constraint but no moral hazard? The Dutch local government bailout puzzle
- 13015-GEM: Hoorn, A.A.J. van, Trust and management: Explaining cross-national differences in work autonomy
- 13016-EEF: Boonman, T.M., J.P.A.M. Jacobs and G.H. Kuper, Sovereign debt crises in Latin America: A market pressure approach
- 13017-GEM: Oosterhaven, J., M.C. Bouwmeester and M. Nozaki, The impact of production and infrastructure shocks: A non-linear input-output programming approach, tested on an hypothetical economy
- 13018-EEF: Cavapozzi, D., W. Han and R. Miniaci, Alternative weighting structures for multidimensional poverty assessment
- 14001-OPERA: Germs, R. and N.D. van Foreest, Optimal control of production-inventory systems with constant and compound poisson demand
- 14002-EEF: Bao, T. and J. Duffy, Adaptive vs. educative learning: Theory and evidence
- 14003-OPERA: Syntetos, A.A. and R.H. Teunter, On the calculation of safety stocks
- 14004-EEF: Bouwmeester, M.C., J. Oosterhaven and J.M. Rueda-Cantuche, Measuring the EU value added embodied in EU foreign exports by consolidating 27 national supply and use tables for 2000-2007



- 14005-OPERA: Prak, D.R.J., R.H. Teunter and J. Riezebos, Periodic review and continuous ordering
- 14006-EEF: Reijnders, L.S.M., The college gender gap reversal: Insights from a life-cycle perspective
- 14007-EEF: Reijnders, L.S.M., Child care subsidies with endogenous education and fertility
- 14008-EEF: Otter, P.W., J.P.A.M. Jacobs and A.H.J. den Reijer, A criterion for the number of factors in a data-rich environment
- 14009-EEF: Mierau, J.O. and E. Suari Andreu, Fiscal rules and government size in the European Union
- 14010-EEF: Dijkstra, P.T., M.A. Haan and M. Mulder, Industry structure and collusion with uniform yardstick competition: theory and experiments
- 14011-EEF: Huizingh, E. and M. Mulder, Effectiveness of regulatory interventions on firm behavior: a randomized field experiment with e-commerce firms
- 14012-GEM: Bressand, A., Proving the old spell wrong: New African hydrocarbon producers and the 'resource curse'
- 14013-EEF: Dijkstra P.T., Price leadership and unequal market sharing: Collusion in experimental markets
- 14014-EEF: Angelini, V., M. Bertoni, and L. Corazzini, Unpacking the determinants of life satisfaction: A survey experiment
- 14015-EEF: Heijdra, B.J., J.O. Mierau, and T. Trimborn, Stimulating annuity markets
- 14016-GEM: Bezemer, D., M. Grydaki, and L. Zhang, Is financial development bad for growth?
- 14017-EEF: De Cao, E. and C. Lutz, Sensitive survey questions: measuring attitudes regarding female circumcision through a list experiment
- 14018-EEF: De Cao, E., The height production function from birth to maturity
- 14019-EEF: Allers, M.A. and J.B. Geertsema, The effects of local government amalgamation on public spending and service levels. Evidence from 15 years of municipal boundary reform
- 14020-EEF: Kuper, G.H. and J.H. Veurink, Central bank independence and political pressure in the Greenspan era
- 14021-GEM: Samarina, A. and D. Bezemer, Do Capital Flows Change Domestic Credit Allocation?
- 14022-EEF: Soetevent, A.R. and L. Zhou, Loss Modification Incentives for Insurers Under Expected Utility and Loss Aversion





14023-EEF: Allers, M.A. and W. Vermeulen, Fiscal Equalization, Capitalization and the Flypaper Effect.

14024-GEM: Hoorn, A.A.J. van, Trust, Workplace Organization, and Comparative Economic Development.

14025-GEM: Bezemer, D., and L. Zhang, From Boom to Bust in de Credit Cycle: The Role of Mortgage Credit.

14026-GEM: Zhang, L., and D. Bezemer, How the Credit Cycle Affects Growth: The Role of Bank Balance Sheets.

14027-EEF: Bružikas, T., and A.R. Soetevent, Detailed Data and Changes in Market Structure: The Move to Unmanned Gasoline Service Stations.

14028-EEF: Bouwmeester, M.C., and B. Scholtens, Cross-border Spillovers from European Gas Infrastructure Investments.

14029-EEF: Lestano, and G.H. Kuper, Correlation Dynamics in East Asian Financial Markets.

14030-GEM: Bezemer, D.J., and M. Grydaki, Nonfinancial Sectors Debt and the U.S. Great Moderation.

14031-EEF: Hermes, N., and R. Lensink, Financial Liberalization and Capital Flight: Evidence from the African Continent.

14032-OPERA: Blok, C. de, A. Seepma, I. Roukema, D.P. van Donk, B. Keulen, and R. Otte, Digitalisering in Strafrechtketens: Ervaringen in Denemarken, Engeland, Oostenrijk en Estland vanuit een Supply Chain Perspectief.

14033-OPERA: Olde Keizer, M.C.A., and R.H. Teunter, Opportunistic condition-based maintenance and aperiodic inspections for a two-unit series system.

14034-EEF: Kuper, G.H., G. Sierksma, and F.C.R. Spieksma, Using Tennis Rankings to Predict Performance in Upcoming Tournaments

15001-EEF: Bao, T., X. Tian, X. Yu, Dictator Game with Indivisibility of Money

15002-GEM: Chen, Q., E. Dietzenbacher, and B. Los, The Effects of Ageing and Urbanization on China's Future Population and Labor Force

15003-EEF: Allers, M., B. van Ommeren, and B. Geertsema, Does intermunicipal cooperation create inefficiency? A comparison of interest rates paid by intermunicipal organizations, amalgamated municipalities and not recently amalgamated municipalities

15004-EEF: Dijkstra, P.T., M.A. Haan, and M. Mulder, Design of Yardstick Competition and Consumer Prices: Experimental Evidence

15005-EEF: Dijkstra, P.T., Price Leadership and Unequal Market Sharing: Collusion in Experimental Markets



15006-EEF: Anufriev, M., T. Bao, A. Sutin, and J. Tuinstra, Fee Structure, Return Chasing and Mutual Fund Choice: An Experiment

15007-EEF: Lamers, M., Depositor Discipline and Bank Failures in Local Markets During the Financial Crisis

15008-EEF: Oosterhaven, J., On de Doubtful Usability of the Inoperability IO Model

15009-GEM: Zhang, L. and D. Bezemer, A Global House of Debt Effect? Mortgages and Post-Crisis Recessions in Fifty Economies

15010-I&O: Hooghiemstra, R., N. Hermes, L. Oxelheim, and T. Randøy, The Impact of Board Internationalization on Earnings Management

15011-EEF: Haan, M.A., and W.H. Siekman, Winning Back the Unfaithful while Exploiting the Loyal: Retention Offers and Heterogeneous Switching Costs

15012-EEF: Haan, M.A., J.L. Moraga-González, and V. Petrikaite, Price and Match-Value Advertising with Directed Consumer Search

15013-EEF: Wiese, R., and S. Eriksen, Do Healthcare Financing Privatisations Curb Total Healthcare Expenditures? Evidence from OECD Countries

15014-EEF: Siekman, W.H., Directed Consumer Search

15015-GEM: Hoorn, A.A.J. van, Organizational Culture in the Financial Sector: Evidence from a Cross-Industry Analysis of Employee Personal Values and Career Success

15016-EEF: Te Bao, and C. Hommes, When Speculators Meet Constructors: Positive and Negative Feedback in Experimental Housing Markets

15017-EEF: Te Bao, and Xiaohua Yu, Memory and Discounting: Theory and Evidence

15018-EEF: Suari-Andreu, E., The Effect of House Price Changes on Household Saving Behaviour: A Theoretical and Empirical Study of the Dutch Case

15019-EEF: Bijlsma, M., J. Boone, and G. Zwart, Community Rating in Health Insurance: Trade-off between Coverage and Selection

15020-EEF: Mulder, M., and B. Scholtens, A Plant-level Analysis of the Spill-over Effects of the German *Energiewende*

15021-GEM: Samarina, A., L. Zhang, and D. Bezemer, Mortgages and Credit Cycle Divergence in Eurozone Economies

16001-GEM: Hoorn, A. van, How Are Migrant Employees Managed? An Integrated Analysis

16002-EEF: Soetevent, A.R., Te Bao, A.L. Schippers, A Commercial Gift for Charity

16003-GEM: Bouwmeester, M.C., and J. Oosterhaven, Economic Impacts of Natural Gas Flow Disruptions



16004-MARK: Holtrop, N., J.E. Wieringa, M.J. Gijsenberg, and P. Stern, Competitive Reactions to Personal Selling: The Difference between Strategic and Tactical Actions

16005-EEF: Plantinga, A. and B. Scholtens, The Financial Impact of Divestment from Fossil Fuels

16006-GEM: Hoorn, A. van, Trust and Signals in Workplace Organization: Evidence from Job Autonomy Differentials between Immigrant Groups



[www.rug.nl/feb](http://www.rug.nl/feb)