

Hauser, Christoph

**Working Paper**

## Effects of employee social capital on wage satisfaction, job satisfaction and organizational commitment

Working Papers in Economics and Statistics, No. 2015-12

**Provided in Cooperation with:**

Institute of Public Finance, University of Innsbruck

*Suggested Citation:* Hauser, Christoph (2015) : Effects of employee social capital on wage satisfaction, job satisfaction and organizational commitment, Working Papers in Economics and Statistics, No. 2015-12, University of Innsbruck, Research Platform Empirical and Experimental Economics (eecon), Innsbruck

This Version is available at:

<https://hdl.handle.net/10419/142729>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



# Effects of employee social capital on wage satisfaction, job satisfaction and organizational commitment

Christoph Hauser

Working Papers in Economics and Statistics

2015-12

**University of Innsbruck**  
**Working Papers in Economics and Statistics**

The series is jointly edited and published by

- Department of Banking and Finance
- Department of Economics
- Department of Public Finance
- Department of Statistics

Contact address of the editor:  
Research platform "Empirical and Experimental Economics"  
University of Innsbruck  
Universitaetsstrasse 15  
A-6020 Innsbruck  
Austria  
Tel: + 43 512 507 7171  
Fax: + 43 512 507 2970  
E-mail: [eeecon@uibk.ac.at](mailto:eeecon@uibk.ac.at)

The most recent version of all working papers can be downloaded at  
<http://eeecon.uibk.ac.at/wopec/>

For a list of recent papers see the backpages of this paper.

# **Effects of Employee Social Capital on Wage Satisfaction, Job Satisfaction and Organizational Commitment**

**Christoph Hauser<sup>#</sup>**

<sup>#</sup> University of Innsbruck

## **Abstract:**

The article proposes that basic social attitudes and associational networks of employees influence their interaction with coworkers and managers at the workplace and thereby also shape work attitudes and behavior. Two terms are introduced to analyze this hypothesis: Civic Social Capital (denoting personal trust and associational activity) and Workplace Social Capital (social interaction with colleagues and trust towards management). Based on a survey of 1007 employees I demonstrate the impact of social trust and two forms of institutional trust (confidence towards national and regional institutions) on a composite index of workplace social capital. In addition, social and institutional trust also influence work related attitudes such as perception of a fair wage, job satisfaction and organizational commitment. Once workplace social capital is controlled for in regressions on work related attitudes, social trust becomes insignificant. Thus, workplace social capital serves as a transmission mechanism converting social trust in enhanced rates of both wage/job satisfaction and in particular organizational commitment. In contrast, confidence towards regional institutions exerts a sustained impact on work related attitudes that persists alongside the impact of social interaction with colleagues and management.

**Key Words:** Civic Social Capital; Social Trust; Institutional Trust; Workplace Social Capital; Job Satisfaction; Organizational Commitment

**JEL Classification:** Z1, Z13, J24; J28

## 1) Introduction

Having satisfied employees is good for a firm. The fruits of high job satisfaction are manifold: increased organizational effectiveness (Koys 2001), improved individual performance (Sousa-Poza and Sousa-Poza 2000), highly satisfied customers (Brown and Lam 2008) or reduced rates of absenteeism (Sagie 1998). In two recent studies both Böckerman and Ilmakunnas (2012) and Bryson et al. (2014) confirm the link between employee satisfaction and workplace productivity using elaborate statistical techniques with results robust to various specifications. Whereas the consequences of worker well-being are fairly clear, its origin is still somewhat mysterious. The central thesis of the paper posits that worker attitudes are not (only) determined by the situational context of the organization, but are driven to a sizable extent by worker characteristics such as ability to cooperate and forming high-trust relationships<sup>1</sup>.

On a macro-level, a collaborative workforce is increasingly seen as a fundamental driving force of organizational performance and economic activity. A high degree of cooperation facilitates the formation and growth of firms, which sustains labor productivity and thereby supports economic growth (Bloom et al. 2012; La Porta et al. 1997). Miller and Whitford (2002) argue that rules and incentives are inadequate instruments for settling the principal-agent problems inherent in organizations. Instead, they propose trust-based relationships as more efficient means of resolving such conflicts. Such relationships have important ramifications for overall economic activity: “virtually every commercial transaction has within itself an element of trust... it can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence” (Arrow (1972), p. 37).

Empirical analyses suggest there are stark national differences in the endowment with social trust (Algan and Cahuc 2013) that exhibit considerable influences on economic growth (Algan and Cahuc 2010). As sources of such disparities trust rates the political scientist Robert Putnam proposes long-standing historical developments that favor (or inhibit) the formation of egalitarian and meritocratic institutions. Putnam (1993) takes a more comprehensive view of cooperative resources by coining the term social capital defined as “features of social organization, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions” (p. 167).

---

<sup>1</sup> Studies on determinants rooted in the organizational context often focus on self-employed vs. paid employees. For an overview and core findings of this literature see Millán, J.M., J. Hessels, R. Thurik, R. Aguado. 2013. Determinants of job satisfaction: a European comparison of self-employed and paid employees. *Small Business Economics* 40(3) 651-670.

After examining a broad array of indicators measuring norms and networks Guiso et al. (2008) confirm that at least 50% of the regional gap in social capital in Italy is due to longstanding differences in institutional developments (free city states in the North; centralized and autocratic governments in the South). Furthermore, Crescenzi et al. (2013) show that social networks and altruistic norms promote knowledge diffusion and regional innovation in Italy. Tabellini (2010) generalizes these findings to a European context by constructing a measure of cultural capital with questions on social norms and generalized trust from the World Values Survey and illustrating the impact of local culture on long-run economic growth in a sample of European regions.

The aforementioned analyses point to the importance of social attitudes and networks for economic activity, but fail to elucidate the mechanisms responsible for connecting social capital and workplace attitudes and behavior. The theoretical groundwork for such a connection is laid by Westlund and Bolton (2003) who conceive of social capital as a series of layers stretching from the individual (with distinctive beliefs and preferences) to whole nations (characterized by a national culture). They coin the term “spacebound social capital” to denote the public good properties of social norms and preferences reflected in local human relations. The paper transposes such individual qualities with respect to trust and networks to an organizational context. Two terms are introduced to distinguish between these components: Civic Social Capital (denoting personal trust and ties with social environment) and Workplace Social Capital (indicating interaction with work colleagues and trust towards management). The central argument in this paper is that civic values and trust improve integration in networks at the workplace and thereby shape work related attitudes concerning job satisfaction and organizational commitment. Given that the latter are important preconditions for work output and productivity, such a transmission of values can explain the promotion of economic development in a territory with large endowments of social capital.

The remainder of the paper is structured as follows. The literature background is documented in Section 2. In this section I also propose three hypotheses. In Section 3 I present a model linking civic and workplace social capital to work related attitudes. Section 4 illustrates the adopted measures, describes the implemented methodology and documents the surveyed data-set. The results are given in Section 5. The last Section 6 concludes the paper with a discussion of the obtained findings.

## **2) Background Literature and Proposed Hypotheses**

**a. Civic Social Capital (CSC) and Workplace Social Capital (WSC): Impact of employee trust and networks on social interaction in the workplace**

One of the first works to connect social capital with organizational performance is Fukuyama (1995), who argues that high social trust among citizens of a country sustains the performance of all its organizations including large firms. This proposition is empirically tested in La Porta et al. (1997) by developing generalized trust scores from a cross-section of countries and data from the World Values Survey. They find that high trust rates are associated with increased importance of large firms in a country (measured by total sales of the largest 20 publicly traded firms as a share of GDP). In addition, the authors follow Fukuyama's conjecture that in low trust societies it is the family that serves as a major mechanism of cooperation, replacing the coordinating role of trust. With responses on trust towards family from the WVS data La Porta et al. (1997) show that strong family ties are negatively associated with the presence of large firms and are thus detrimental to cooperation in large organizations.

Such findings on the importance of civic culture for local firms are replicated and refined by Bloom et al. (2012). Working from regional trust values and data from 4000 firms in 12 countries of Europe, North America and Asia they confirm the beneficial impact of local trust on firm size. Bloom et al. 2012 propose that productivity is not only affected by firm size, but also by a firm's internal organization insofar as social trust enables a greater decentralization of decision-making and thus a more efficient allocation of resources. The empirical analyses confirm that high trust regions exhibit higher degrees of decentralization in firms that are thus organized more efficiently. These analyses have been further developed by Buerker and Minerva (2013), who investigate the impact that civic capital in terms of norms and networks in Italian regions have on the whole plant size distribution. In addition, historically lagged measures are used as instruments for social capital in order to assess the direction of causality. The analyses illustrate that a strong civil society increases both the average and the dispersion of firm size with causality running from culture to economics: "The hallmark of civic capital is to increase cooperation in intra-plant transactions, even when economic incentives to do so are weak (e.g. in large organizations)" (p. 43).

Interaction in firms is critically affected by the social capital of its employees. Larger endowments with (Civic) Social Capital are more conducive to collaboration with colleagues and managers (i.e. Workplace Social Capital). Thus, I posit the following association between the two components of social capital:

*Hypothesis 1: Employees with high endowments of Civic Social Capital (CSC) also exhibit larger stocks of Workplace Social Capital (WSC).*

**b. Workplace Social Capital (WSC) and Work Related Attitudes (WRA): Implications of cooperation in the workplace for employee attitudes towards work and organization**

Organizational science has long recognized the role and importance of social trust and cooperative relationships inside firms. Nahapiet and Ghoshal (1998) investigated social capital as an integrative framework for understanding the creation and sharing of knowledge in an organization. In this perspective the sustained bonds between its members give firms an advantage over markets in terms of production of knowledge. Three dimensions of social capital attributes in firms are proposed: First, structural capital as the network ties between members providing access to communication. Second, relational capital representing the degree of trust within a group and affecting the willingness of individuals to engage in mutual exchange. Third, cognitive capital giving rise to shared cognition or a common system of meaning and, thus, enabling collective understanding. Each of these forms of social capital constitutes a dimension of social structure that facilitates collaboration and improves team performance (Crisp and Jarvenpaa 2013; De Jong et al. 2014; De Jong and Elfring 2010).

However, the effects of social capital in the firm are not limited to the quality of teamwork, but extend to the individual's perception of her workplace. These mechanisms are the main focus of the study by Requena (2003), who investigates the importance of trust towards management and social relations in the firm for job satisfaction and quality of life at the workplace. Looking at data from the Spanish Quality of Life at Work Survey he finds that "social capital is a better predictor of quality of life at work and job satisfaction than are the characteristics of the worker, the company or organization, and the work environment". Satisfied employees are commonly assumed to be productive workers. Empirical evidence for this assumption is produced by Bryson et al. (2014) after analysing British data from the 2011 Workplace Employment Relations Survey. They find that employee job satisfaction is positively associated with workplace financial performance, labor productivity, the quality of output and service, and an additive scale combining all three aspects of performance.

Bryson et al. (2014) point out that the scope of their analysis does not include a refined analysis of how job satisfaction affects workplace performance and driving forces of satisfaction



amenable to employer intervention. We posit that organizational commitment conceived as the employee's involvement in and identification with the organization (Mowday et al. 1982) is a key driving force in this regard. A highly satisfied workforce is thus presumed to be more committed to its organization and more inclined towards greater work input without formal controls or supervision. Workplace Social Capital as the origin of this causal chain reaction is proposed by Watson and Papamarcos (2002). They implement the theoretical measures on social capital in firms by Nahapiet and Ghoshal (1998) and find that interpersonal trust towards management, communication with colleagues and perceptions of normative structures have important repercussions on organizational commitment in a sample of sales professionals from a medical company. From such findings I propose the causal mechanism given in Hypothesis 2:

*Hypothesis 2: Workplace Social Capital increases rates of Job Satisfaction, which in turn sustains Organizational Commitment of employees.*

**c. Civic Social Capital and Work-Related Attitudes: Connection between social attitudes of employees and their outlook on work and organization**

Social culture affects economic outcomes in cross-national analyses. Such macro-level observations have also been successfully replicated at the micro-level of individuals. One of the first studies to investigate the link between social life and work-related attitudes is provided by Liou et al. (1990) and is drawn from responses to the General Social Survey. In their study on the impact of non-work factors on job satisfaction they examine a range of personal attitudes not related to work life. They find that social trust and institutional confidence exert a sizable impact on job satisfaction. Summing up their findings they state that "respondents in the current study seem not to lead their lives in discrete, unrelated categories; instead, they appear to have adopted an integrated approach to life." (p. 85). In particular social trust is found to be a strong predictor for job satisfaction in empirical analyses (Georgellis and Lange 2012; Georgellis et al. 2008)

The mentioned findings point to the importance of social trust for work attitudes and behavior, but they fail to illustrate how the social life is introduced to the professional domain. The critical contribution in this regard is given by Bianchi and Brockner (2012), who examine a potential mechanism for converting trust into job satisfaction. As potential hinge between the two components they propose fairness considerations (procedural and interactional) in a professional

context that might shape work attitudes and satisfaction. There is extensive evidence in the literature that people within the same organization often come to different conclusions about whether their managers and organization are fair. Bianchi and Brockner (2012) propose that dispositional traits specific to the individual (rather than situational characteristics related to the organization) such as social trust shape employees' perception of fair treatment and thus affect work attitudes. Using both survey and experimental data they illustrate the mediating role of fairness perceptions between social trust and employee job satisfaction and organizational commitment.

The argument proposed in this paper is similar to the one proposed by Bianchi and Brockner (2012), but with one crucial difference. Dispositional attitudes emanating from the social domain are again the main focus of the analysis. However, instead of a psychological process we propose a social mechanism that transmits dispositional attitudes into work perspectives and behavior: Individual trust and networks sustaining cooperation and interaction in the workplace and thereby supporting job satisfaction and organizational commitment. The hinge between the social and work domain we propose is thus constituted by workplace social capital and the mechanism given in Hypothesis 3:

*Hypothesis 3: Workplace Social Capital mediates the impact of Civic Social Capital on Work Related Attitudes.*

### **3) The Model**

The main premise of this paper is the association between two related but distinct forms of social capital, namely Civic Social Capital and Workplace Social Capital. The measurement of the former follows the approach illustrated by Van Deth (2003) that distinguishes between dispositional attitudes of individuals towards social interaction indicated by attitudinal measures (social and institutional trust) and information on network adherence (strong ties and weak ties). In combination, these dimensions exemplify the positive development sequence proposed by Putnam that links participation in voluntary associations (weak ties) to the formation of mutual confidence between unrelated members (social trust) and enables the formation and acceptance of functioning institutions (institutional trust). When such a development process can take place successfully over a long period of time, the importance of the clan and the family (strong ties) as coordinating

mechanism for economic activity decreases and the formation of large firms and organizations is crucially supported.

A promising approach to extending Putnam's conception of social capital in terms of trust, norms and networks to the firm level is proposed by Badura et al. (2008). In their framework the social capital of an organization consists of three components closely aligned with Putnam's definition: the quality of social relationships with fellow employees (networks), the degree of confidence towards firm leadership (trust) and the values that underpin interaction in the workplace (norms). These three components are conceived in close proximity to the three social capital clusters proposed by Nahapiet and Ghoshal (1998). Whereas the employee network and leadership trust components clearly emphasise structural and relational aspects of interpersonal relationships, the third component, namely values and norms, denotes the presence of a shared system of meaning and a widely shared collective understanding.

When individuals form an integrated perspective of their social and work lives, their work attitudes and firm loyalty are invariably affected. I propose that this process starts with satisfaction with obtained wage: employees perceive their received wage as more adequate when they are integrated in firm networks rather than isolated from their peers. Along with wage satisfaction the functioning social networks in the firm and trust towards management also increase job satisfaction levels. As the final link in the chain I propose a strong commitment to the organization that results from high rates of Workplace Social Capital in combination with high scores for wage and job satisfaction. The complete transmission channel is given in Figure 1 with Civic Social Capital as the foundation for the ensuing work attitudes.

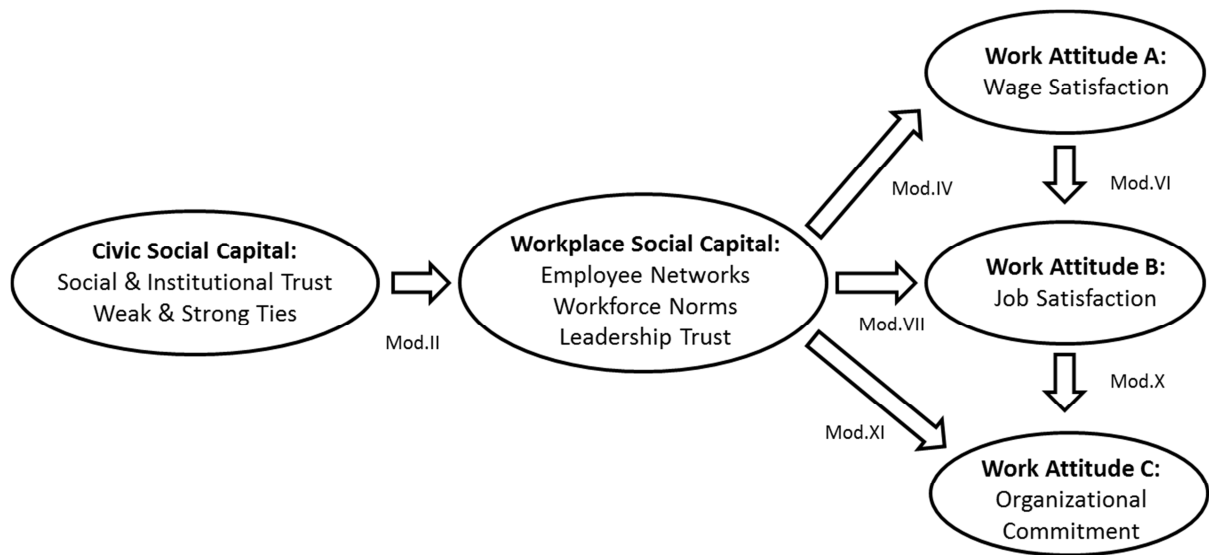


Figure 1: Model depicting causal relationships between Civic Social Capital, Workplace Social Capital and Work Related Attitudes (below the path arrows the respective model number is indicated where the proposed association is empirically tested)

#### 4) Measures, Methodology and Data Set

##### a. Measures

**Civic Social Capital:** The traditional distinction of social capital measures in structural and attitudinal indicators serves as the primary template for selecting apposite survey items. Network structures are further subdivided into weak ties in the form of associational activity and strong ties related to interaction with family/close friends. These questions are based on a 4-point Likert scale that indicates the intensity of activity/interaction (never, less than once per month, more than once per month but less than once per week, at least once per week). Attitudinal measures are conceived as social trust measured with three items from Schussler’s dispositional propensity to trust scale (including the generalized trust question) and institutional trust with questions on degree of confidence in a range of institutions. Given that the latter might not necessarily constitute a one-

dimensional entity because of the specific political situation in the study area, we include questions on trust in national (national parliament, justice system), regional (regional parliament and government) and international (United Nations) institutions. All questions are coded on a 10-point Likert scale (see Table A1 in the appendix for a detailed illustration of all questions).

The total number of indicators amounts to 18 items that are processed with Principal Component Analysis to meaningfully condense the amount of information. The loadings profile illustrated in Table A.4 in the appendix exhibits clearly interpretable factors and produces a Kaiser Mayer Olkin criterion of 0.77, confirming a good degree of sampling adequacy (Hutcheson and Sofroniou 1999). Principal Components Analysis elaborates six factors that amount to an explained variance of 62% with communalities for individual indicators of close to 0.4 and above (the only exception being activity in social services with a communality of 0.19). Whereas *Social Trust* and *Strong Ties* are reproduced as single components, *Weak Ties* and *Institutional Trust* are conveyed in two components. Confidence in institutions clearly exhibits a focus on either national (*Institutional Trust Nation*) or regional institutions (*Institutional Trust Region*). Activity in associations is performed in either cultural/religious/sports groups or alternatively in organizations with an activist or political background. Whereas the latter are regarded by Olson as special interest groups that lobby for preferential policies, the former are primarily deemed to facilitate social interaction and bolster social trust by Putnam. Thus, they are termed *Olson Groups* and *Putnam Groups*, respectively.

**Workplace Social Capital:** The original questionnaire by Badura et al. (2008) includes ten questions for each of the three items. In order to simplify adoption of the instrument we select five questions for each component based on either the loadings structure (i.e. the questions with the highest loadings were selected) or theoretical considerations (i.e. the most distinct questions were chosen in order to increase information content). These are phrased as statements with potential responses ranging from "strongly disagree" to "strongly agree" on a 5-point Likert scale (provided in Table A.2 in the appendix). Rixgens (2010) submits data surveyed with the original questionnaire to a series of validity and reliability tests and finds that the information contained in the three components is highly correlated and thus suitable for formation of a single index. Given that all 15 questions in our survey are also positively and highly significantly correlated, a single *Workplace Social Capital Index* is generated by summing answers (Cronbach's Alpha: 0.95). With the adoption of a single indicator instead of correlated components, potential problems with regard to multicollinearity are prevented and thus the interpretation of results facilitated.

**Work Related Attitudes:** The three core indicators assessing satisfaction with and motivational aspects toward work envisioned in Figure 1 are *Wage Satisfaction*, *Job Satisfaction* and *Organizational Commitment* (each attitude leading to the next). Satisfaction with wage is probed with the questions: “Given your work performance, how adequate do you perceive your income to be?” This question is adopted from the survey Good Work by the German union Verdi, and answers are coded on a 4-point Likert scale (not at all, somewhat adequate, adequate, very adequate). Overall *Job Satisfaction* is measured with the standard question: “All in all, how satisfied would you say you are with your job?” answered on a 10-point Likert scale. *Organizational Commitment* is measured with six questions from the Work Organization module of the General Social Survey (see Table A.3 in the appendix for details). These questions closely correspond to the question battery proposed by Mowday et al. (1982): Item 1 concerns willingness to exert effort on behalf of the organization; Items 2, 4, and 5 reflect the belief in and acceptance of the organization's goals and values; whereas Items 3 and 6 measure the desire to maintain membership in the organization. Performing PCA on the six questions produces one component with Eigenvalue > 1 that is adopted as the indicator of Organizational Commitment (a KMO of 0.81 again confirms good sampling adequacy for performance of a PCA).

**Control Variables:** In line with the existing literature potential demographic determinants for Workplace Social Capital and Work-related Indicators such as *age*, *sex* and four *education* levels (compulsory education, vocational school, high school, tertiary education) are controlled for in the model. In addition, *salary* in the form of six categories from <1000 Euro to >3000 Euro monthly net wage is considered to drive integration in firm networks (by e.g. augmenting the social status) and improving work motivation. Similar to Bianchi and Brockner (2012) we include *size of organization* in the form of number of employees. Given that a large part of our sample (40%) is given by employees working in the *public sector* who may be exposed to working conditions fundamentally different to those in the private sector, we control for this possibility with a dummy variable. In order to capture additional work-specific effects pertaining to seniority and type of work contract, length of *affiliation with firm* measured in years and *full-time* as well as *temporary contract* are also integrated. A comprehensive overview of descriptive statistics and correlations between all adopted measures is given in Table A.5 in the appendix.

## b. Methodology

The individual endowments of Civic Social Capital and Workplace Social Capital are the primary independent variables in the regressions on Work Related Attitudes. These are integrated in a successive fashion in the models in order to investigate the direction of causality depicted in Figure 1.

Table 1 reports the estimates from models I and II assessing the impact of CSC components on the *WSC index* via Ordinary Least Squares (OLS) regression. The estimates are reported in the form of standardized coefficients<sup>2</sup> (termed Beta coefficients) in order to express coefficients as the effect of a one standard deviation change in the independent variable. Hence, it is possible to interpret the magnitude of the impact of individual variables and assess their relative importance for the dependent variable.

Tables 2 and 3 illustrate the estimates of the regressions on WRA indicators in models III - XI. The general structure follows a distinction between baseline, intermediate and full models:

$$\text{Baseline models (III,V,VIII): } WRA = \alpha + \sum_{k=1}^{15} \beta_k CV_k + \sum_{j=1}^6 \gamma_j CSC_j + \varepsilon$$

$$\text{Intermediate models (VI,IX,X): } WRA = \alpha + \sum_{k=1}^{15} \beta_k CV_k + \sum_{j=1}^6 \gamma_j CSC_j + \sum_{l=1}^2 \delta_l WRA_l + \varepsilon$$

$$\text{Full models (IV,VII,XI): } WRA = \alpha + \sum_{k=1}^{15} \beta_k CV_k + \sum_{j=1}^6 \gamma_j CSC_j + \sum_{l=1}^2 \delta_l WRA_l + \vartheta WSC + \varepsilon$$

Where  $\alpha, \beta, \gamma, \delta, \vartheta$  are the parameters to be estimated, WRA the three indicators of work related attitudes,  $CV_k$  denotes the fifteen control variables,  $CSC_j$  denotes six components of Civic Social Capital,  $WRA_l$  are two (respectively one) indicators of Work Related Attitudes influencing another WRA indicator, WSC denotes the Workplace Social Capital Index, and  $\varepsilon$  is the remainder noise with the usual assumptions.

The baseline models illustrate the impact of control variables and CSC components on the individual WRA indicator. The intermediate models display the additional effects exercised by antecedent WRA indicators. Full models exhibit the impact of all proposed variables including the effect by Workplace Social Capital. Any changes with regard to coefficients and explanatory power are interpreted in the light of the proposed transmission hypothesis (e.g. with an analysis of the effects of the CSC components and the changes ensuing with the integration of WSC).

---

<sup>2</sup> Standardized coefficients are computed as  $\hat{\beta}_j^S = \hat{\beta}_j * \frac{SD(x_j)}{SD(Y)}$ , where  $SD(x_j)$  is the standard deviation of variable  $x_j$ .

*Wage Satisfaction* and *Job Satisfaction* are scaled in an ordinal fashion, thus I employ ordinal logit models (for *Wage Satisfaction*) and ordinal probit models (for *Job Satisfaction*) as means of estimation<sup>3</sup>. The tables present the coefficient estimates and to assess the impact the sign of the coefficient along with statistical significance can be interpreted and given that the CSC components all exhibit the same (normal) distribution the magnitude of their impact can be directly compared. *Organizational Commitment* is given by the principal components scores from PCA on the pertinent questions, thus the regressions on this indicator are carried out with OLS. The estimates are again reported in terms of standardized coefficients. The assumptions of the models are checked via residual diagnostics, and the quality of the models (the model fit) computed using R squared for OLS models or the Pseudo R Squared by McFadden for ordinal models.

Given that the entire data set is based on the same questionnaire, common variance bias in answering all questions may artificially augment the associations between the items. In order to prevent the incidence of consistency artifacts the questions on general attitudes towards social interaction (CSC) were asked before the more specific questions on firm networks and work-related attitudes. This also enables questions used as dependent variables to be positioned in the questionnaire after questions serving as independent variables (Salancik and Pfeffer 1977). The clear factor profile of the Civic Social Capital questions and their in absolute terms rather low correlations with Workplace Social Capital (all less than 0.3) illustrate that the relationship between the two components is not artificially induced. Furthermore, the possible incidence of common variance bias related to work-specific questions only was analyzed with Harman's one factor test. Multiple factors clearly delineating the different constructs are produced, with the first factor accounting for less than the majority of the variance (45%). Hence also this set of questions restricted to social interaction and satisfaction/commitment levels in the workplace does not appear to be affected by common method bias.

Analyzing all regressions for the incidence of multicollinearity provides Variance Inflation factors for each variable well below 4, which is less than half the maximum permissible value of 10 indicated by Belsley et al. (2005).

---

<sup>3</sup> Given that *Wage Satisfaction* is coded on a 4-point Likert scale, an Ordinal Logit estimation is deemed most appropriate for this type of model. In contrast, as is customary in the literature, *Job Satisfaction* is modeled with an Ordinal Probit estimation due to the approximately normal distribution of the variable. However, we also implemented uniform Ordinal Logit and Ordinal Probit (and also OLS) to both variables without any modifications of substantial outcomes. Results of these estimations are available on request.



### **c. Data Set**

The data set consists of overall 1007 responses made by working adults in a survey administered through telephone interviews. The survey was implemented from December 2013 to March 2014 by the polling firm Apollis in the Autonomous Province of Bozen-Bolzano in Northern Italy. The area is characterized by a functioning institutional framework and strong economic performance with low unemployment. Given that all respondents exhibit a common background in terms of local institutions and economic production, the provided responses are more reflective of internal associations between attitudes than perceptive to the confounding influence of varying external conditions.

The participants predominantly worked full-time (65.2%) and were employed on a permanent contract (78.6%). The mean age of the participants was 45.5 years (Standard Deviation S.D.: 11.0) and on average they had been at their jobs for 15.4 years (SD: 11.2). Females accounted for 56% of all participants. Respondents were active in a variety of sectors, in particular public administration (40.4%) and service sectors such as retail trade (12.3%) and miscellaneous services (11.1%). The majority of participants (65.4%) earned a net wage between EUR 1000 and EUR 2000 per month.

## **5) Results**

### **a. Association between CSC and WSC**

**Table 1: OLS regressions of Workplace Social Capital Index on control variables and Civic Social Capital components**

	Model I (OLS)			Model II (OLS)		
	WSC Sum Variable			WSC Sum Variable		
	Beta Coeff.	P Val.	Sig.	Beta Coeff.	P Val.	Sig.
Educ (Vocational School)	0.086	0.127		0.021	0.731	
Educ (High School)	-0.003	0.953		-0.087	0.163	
Educ (Tertiary Education)	-0.004	0.942		-0.124	0.050	.
Sex (female)	-0.014	0.748		0.013	0.770	
Age	-0.082	0.076	*	-0.121	0.019	*
Public Sector	-0.131	0.001	***	-0.148	0.001	**
Size of Organization	-0.068	0.055	.	-0.080	0.033	*
Affiliation with Org.	-0.061	0.204		-0.072	0.172	
Full-time Contract	-0.132	0.006	**	-0.107	0.031	*
Temporary Contract	0.079	0.036	*	0.073	0.067	.
Salary: 1000-1500	0.151	0.009	**	0.131	0.034	*
Salary: 1500-2000	0.172	0.010	*	0.178	0.011	*
Salary: 2000-2500	0.161	0.005	**	0.161	0.008	**
Salary: 2500-3000	0.134	0.004	**	0.139	0.005	**
Salary: >3000	0.072	0.098	.	0.085	0.066	.
Institutional Trust Nation				0.169	0.000	***
Social Trust				0.242	0.000	***
Institutional Trust Region				0.086	0.020	*
Strong Ties				0.006	0.868	
Olson Groups				0.024	0.519	
Putnam Groups				0.052	0.160	
R Squared	0.067			0.181		
Adjusted R Squared	0.048			0.154		

The results of the OLS estimations regressing *WSC Index* on control variables and on the six CSC components are reported in Table 1. The two regressions corroborate the importance of social capital in the form of personal trust for social interaction in an organizational context. Higher wages also improve integration in networks, but the impact is limited to wages higher than EUR 1000 (and even exhibits a decrease for the highest category EUR >3000). In contrast, *Full-time Contract* and *Public Sector* has a significant negative impact on Workplace Social Capital. The higher workload that goes with a full time contract may be detrimental for social interaction in the workplace. In contrast, the negative impact exerted by activity in the public sector could reflect the lack of a common profit motive of the organization which may contribute to building team experience and group cohesion. Alternatively, private enterprises have higher incentives to purposefully implement initiatives designed to strengthen group collaboration and cohesion which may be reflected in the estimation

outcomes. The coefficient of Temporary contract is negative and significant for Model I, but not significant at the 5% confidence level after the integration of the CSC components in Model II.

Integrating the six indicators of Civic Social Capital more than triples the adjusted R squared from less than 5% in the baseline to more than 15% in the full model and thus provides support for Hypothesis 1. Whereas the structural indicators do not exhibit significant coefficients, all three attitudinal measures display (highly) significant positive effects. The Beta coefficient of *Social Trust* approximately corresponds to the sum of the beta coefficients by the institutional trust indicators, which thus gives equal weight to horizontal (social) and vertical (institutional) trust in forming network ties in the firm. The impact with regard to institutions is strongest for *Institutional Trust Nation* with a beta value twice the size of that for *Institutional Trust Region*. Hence, the radius of institutional trust seems to play a role for the strength of its impact on rates of Workplace Social Capital.

#### **b. Impact of CSC and WSC on WRA**

Table 2 reports the estimation results from regressions on Wage Satisfaction (Models III & IV) and Job Satisfaction (Models V – VII)<sup>44</sup>.

---

<sup>44</sup> Given that Wage Satisfaction is coded on a 4-point Likert scale we implement an Ordinal Logit estimation for this type of model. In contrast, as is customary in the literature Job Satisfaction is modeled with an Ordinal Probit estimation due to the approximately normal distribution of the variable. However, we also implemented uniform Ordinal Logit and Ordinal Probit (and even OLS) to both variables without any modifications of substantial outcomes. Results of these estimations are available on request.

**Table 2: Ordinal Logit and Probit regressions on Wage Satisfaction and Job Satisfaction**

	Model III (Ord Log) Wage Satisfaction			Model IV (Ord Log) Wage Satisfaction			Model V (Ord Prob) Job Satisfaction			Model VI (Ord Prob) Job Satisfaction			Model VII (Ord Prob) Job Satisfaction		
	Coeff	P Val.	Sig.	Coeff	P Val.	Sig.	Coeff	P Val.	Sig.	Coeff	P Val.	Sig.	Coeff	P Val.	Sig.
Educ (Vocational School)	-0.050	0.849		-0.046	0.870		-0.286	0.042	*	-0.289	0.041	*	-0.361	0.017	*
Educ (High School)	-0.341	0.211		-0.276	0.339		-0.395	0.007	**	-0.371	0.011	*	-0.333	0.032	*
Educ (Tertiary Educ.)	-0.718	0.021	*	-0.493	0.136		-0.682	0.000	***	-0.616	0.000	***	-0.603	0.001	**
Sex (female)	0.315	0.109		0.272	0.189		0.210	0.038	*	0.174	0.087	.	0.145	0.174	
Age	-0.006	0.544		-0.004	0.719		0.003	0.513		0.004	0.461		0.011	0.043	*
Public Sector	-0.245	0.179		-0.219	0.253		0.000	0.998		0.016	0.862		0.217	0.029	*
Size of Organization	0.000	0.192		0.000	0.241		0.000	0.225		0.000	0.313		0.000	0.976	
Affiliation with Org.	-0.008	0.376		0.001	0.894		-0.003	0.466		-0.001	0.767		-0.003	0.535	
Full-time Contract	-0.973	0.000	***	-0.906	0.000	***	-0.092	0.419		0.013	0.910		0.052	0.667	
Temporary Contract	0.082	0.702		0.035	0.880		0.059	0.589		0.066	0.547		0.005	0.965	
Salary: 1000-1500	0.911	0.001	**	0.828	0.004	**	0.239	0.090	.	0.133	0.352		0.097	0.519	
Salary: 1500-2000	1.706	0.000	***	1.553	0.000	***	0.452	0.005	**	0.268	0.106		0.206	0.236	
Salary: 2000-2500	2.174	0.000	***	1.967	0.000	***	0.604	0.003	**	0.367	0.072	.	0.273	0.206	
Salary: 2500-3000	2.813	0.000	***	2.569	0.000	***	0.593	0.024	*	0.258	0.338		0.115	0.686	
Salary: >3000	3.558	0.000	***	3.439	0.000	***	0.955	0.000	***	0.569	0.043	*	0.424	0.165	
Inst. Trust Nation	0.222	0.004	**	0.191	0.019	*	0.082	0.040	*	0.059	0.141		-0.005	0.904	
Social Trust	0.149	0.062	.	0.087	0.306		0.089	0.029	*	0.073	0.073	.	-0.027	0.533	
Inst. Trust Region	0.243	0.002	**	0.181	0.026	*	0.167	0.000	***	0.145	0.000	***	0.128	0.002	**
Strong Ties	0.159	0.050	.	0.140	0.099	.	-0.028	0.501		-0.048	0.257		-0.052	0.242	
Olson Groups	-0.019	0.805		0.006	0.944		-0.030	0.459		-0.029	0.484		-0.031	0.463	
Putnam Groups	-0.073	0.340		-0.099	0.216		0.073	0.072	.	0.082	0.042	*	0.059	0.161	
Wage Satisfaction										0.346	0.000	***	0.268	0.000	***
WSC Index				0.035	0.000	***							0.039	0.000	***
-----															
McFadden	0.060			0.079			0.027			0.043			0.093		

As was the case for regressions on *WSC Index*, *Salary* and *Full-time Contract* are again major determinants for perception of a fair wage in Model III. However, in this case the coefficients of the dummy variables for wage levels increase with every category in a monotonous fashion. Both institutional trust indicators exert a highly significant positive impact on *Wage Satisfaction*, whereas the effect of *Social Trust* is only weakly significant. Integration of *Workplace Social Capital Index* in Model IV provides a highly significant positive impact and increases the Pseudo R squared from 6% to 8% with reductions in both size and significance levels of institutional trust coefficients. Nevertheless, both regional and national institutional trust coefficients remain significant at the 5% confidence level. Thus, Workplace Social Capital mediates only a minor fraction of the impact exerted by confidence toward institutions on *Wage Satisfaction*.

Similar to *Wage Satisfaction* the baseline Model V for *Job Satisfaction* exhibits a positive impact for *Salary* with coefficients increasing with each category. In addition, education levels show an inverse effect on *Job Satisfaction*, with tertiary educated employees displaying the lowest rates. This may point to the incidence of higher demands by highly educated persons towards their workplace. As illustrated in previous empirical literature, female employees tend to report higher job satisfaction levels than their male peers. Among the CSC components we again observe significant positive coefficients by the three trust variables, whereas the three structural indicators related to weak and strong ties are not significant at the 5% confidence level. The inclusion of *Wage Satisfaction* in Model VI reduces coefficients and significance levels of the three trust indicators, with *Institutional Trust Region* still exhibiting a highly significant coefficient. Once satisfaction with obtained wage is controlled for in Model VI, only the highest wage category remains significant. Thus, higher wages tend to increase satisfaction with obtained wages and thereby also improve overall job satisfaction. The integration of *Workplace Social Capital Index* in (full) Model VII again exerts a highly significant positive impact and more than doubles the Pseudo R squared from 4% to 9%. The mediating impact of Workplace Social Capital can be observed from the insignificant coefficients of *Social Trust* and *Institutional Trust Nation*. In contrast, even in the full model, *Institutional Trust Region* still displays a highly significant positive coefficient. Both regressions on *Wage Satisfaction* and *Job Satisfaction* illustrate the impact of WSC on WRA and thus provide support for Hypothesis 2. Whereas integration of WSC in the full model for *Wage Satisfaction* only weakly affects the coefficients of institutional trust, the transmission effect is clearly evident in the full model for *Job Satisfaction*, where coefficients for *Institutional Trust Nation* and *Social Trust* lose the significance exhibited in the baseline model (thus corroborating Hypothesis 3). However, also in this model the coefficient for *Institutional Trust Region* remains highly significant.

**Table 3: OLS Regressions illustrating determinants of Organizational Commitment**

	Model VIII (OLS) Org Comm			Model IX (OLS) Org Comm			Model X (OLS) Org Comm			Model XI (OLS) Org Comm		
	Beta	P Val.	Sig.	Beta	P Val.	Sig.	Beta	P Val.	Sig.	Beta	P Val.	Sig.
Educ (Vocational S.)	0.013	0.836		0.016	0.797		0.065	0.233		0.030	0.540	
Educ (High School)	-0.056	0.380		-0.042	0.499		0.015	0.789		0.011	0.829	
Educ (Tertiary Edu.)	-0.154	0.016	*	-0.126	0.045	*	-0.026	0.645		-0.020	0.693	
Sex (female)	0.082	0.075	.	0.067	0.141		0.033	0.424		0.050	0.167	
Age	-0.022	0.667		-0.017	0.733		-0.022	0.633		0.034	0.399	
Public Sector	-0.122	0.004	***	-0.115	0.006	**	-0.111	0.003	**	-0.033	0.322	
Size of Organization	-0.083	0.027	*	-0.076	0.040	*	-0.060	0.073	.	-0.024	0.410	
Affiliation with Org.	0.014	0.786		0.031	0.528		0.028	0.523		0.093	0.022	*
Full-time Contract	-0.025	0.614		0.011	0.822		0.008	0.865		0.043	0.271	
Temporary Contract	0.045	0.253		0.048	0.216		0.028	0.421		0.011	0.737	
Salary: 1000-1500	0.023	0.713		-0.019	0.764		-0.049	0.380		-0.066	0.176	
Salary: 1500-2000	0.101	0.153		0.030	0.670		-0.019	0.762		-0.043	0.441	
Salary: 2000-2500	0.060	0.321		-0.001	0.986		-0.050	0.360		-0.072	0.137	
Salary: 2500-3000	0.106	0.030	*	0.055	0.266		0.025	0.579		-0.001	0.971	
Salary: >3000	0.082	0.093	.	0.023	0.647		-0.012	0.791		-0.028	0.452	
Inst. Trust Nation	0.066	0.080	.	0.046	0.217		0.016	0.627		-0.042	0.152	
Social Trust	0.187	0.000	***	0.175	0.000	***	0.136	0.000	***	0.033	0.274	
Inst. Trust Region	0.153	0.000	***	0.134	0.000	***	0.072	0.033	*	0.069	0.019	*
Strong Ties	-0.006	0.886		-0.019	0.626		-0.003	0.934		-0.008	0.782	
Olson Groups	0.016	0.672		0.017	0.648		0.023	0.489		0.015	0.618	
Putnam Groups	0.040	0.277		0.046	0.207		0.025	0.452		0.001	0.971	
Wage Satisfaction				0.185	0.000	***	0.081	0.022	*	0.016	0.606	
Job Satisfaction							0.439	0.000	***	0.238	0.000	***
WSC Index										0.547	0.000	***
R Squared	0.120			0.150			0.316			0.515		
Adjusted R Squared	0.092			0.122			0.292			0.496		

The results of the OLS estimations for the analyses of determinants for *Organizational Commitment* are reported in Table 3. The baseline Model VIII exhibits a negative impact by both employment in the public sector and firm size. In contrast to the regressions on the satisfaction indicators, wage levels do not display significant coefficients (with the exception of one category that becomes insignificant in intermediate and full models). As in previous estimations, the structural indicators of social capital exhibit no significant coefficients. The three attitudinal measures display significantly positive effects, but in the case of *Institutional Trust Nation* only weakly so (at a confidence level of 10%). In contrast, both *Social Trust* and *Institutional Trust Region* are highly significant and exhibit larger beta coefficients than does *Institutional Trust Nation*. The former two coefficients are decreased by the successive integration of *Wage Satisfaction* (Model IX) and *Job Satisfaction* (Model X), but remain statistically significant. Once *WSC Index* is controlled for in the full Model XI, the effect of *Social Trust* disappears, whereas *Institutional Trust Region* is still significant at the 5% confidence level. Considering the Beta Coefficients in the full model, the coefficient for *WSC Index* exhibits the largest value, namely more than twice the size of the second highest indicator *Job Satisfaction*. The adjusted R squared increases from 9% in the baseline model to 50% in the full model. Integrating *WSC Index* in Model XI alone increases the adjusted R squared by 20%. This steep increase in combination with a Beta value for the WSC Index that is more than twice the size of the second highest value (*Job Satisfaction*) underscores the importance of social interaction and firm networks for commitment to the firm's values and goals, thus sustaining Hypothesis 2. In addition, controlling for *WSC Index* eliminates the significance of *Social Trust* and thus corroborates the transmission mechanism postulated in Hypothesis 3. Similar to the results for *Job Satisfaction*, there is still a residual impact of *Institutional Trust Region* that eludes this transmission mechanism.

## 6) Conclusion and Discussion

This paper demonstrates that dispositional attitudes represented by social and institutional trust matter for integration in social networks at the workplace and thus shape overall attitudes toward work such as job satisfaction and organizational commitment. Two new terms are introduced to capture existing theoretical frameworks of social capital: Civic Social Capital (denoting personal endowments with networks and trust) and Workplace Social Capital (measuring integration in social networks in the workplace and trust towards management). Of the six components for Civic Social Capital only the three attitudinal measures relating to social and institutional trust exhibit an impact

on Workplace Social Capital and Work Related Indicators. Two indicators of associational activity and one indicator of strong ties do not display any effects on social relations at the workplace. There is also an impact of social trust and confidence in national institutions on Work Related Attitudes mediated by Workplace Social Capital: once the latter is controlled for in the model, the former do not exhibit any significant effects on job satisfaction or organizational commitment. Thus, Workplace Social Capital serves as a transmission belt converting dispositional attitudes of trust to higher rates of satisfaction and commitment (with presumed effects on worker output and productivity). The same does not apply to confidence toward regional institutions; it still exhibits significant coefficients in the full models.

The latter finding suggests that confidence in institutions may represent a separate dimension of trust and constitute an important determinant of social relations at the workplace. Two points are of particular salience for research on institutional trust: First, its relationship with social trust (described as either weakly positive or non-existent by Morrone et al. (2009)) and second, an analysis of its dimensionality. With regard to the first point, the origins of both types of trust are still contested. Even though they are widely considered to constitute cultural characteristics (in particular by the economics and political science literature), the variation of trust in fellow persons and public institutions within homogeneous societies (with a common institutional framework) is considerable and bears further scrutiny.

Concerning dimensionality of confidence toward institutions, Rothstein and Stolle (2008) perform an analysis with data from the World Values Survey and classify institutional trust along three different types: Political institutions (political parties and government bodies), order institutions (police, army, legal institutions) and control institutions (the press and the media). Research on the effects of such different forms of institutional trust on social relationships and work attitudes may shed further light on attitudinal driving forces of social interaction in firms and organizational efficiency.

The findings of this study are not limited to academic discussions, but also have implications for managerial practice. The obtained results indicate that firms benefit from employing high-trust individuals (with regard to social and institutional trust) in order to obtain a highly motivated and committed workforce. Testing for the propensity to trust and selecting persons with the highest endowments may be one option that could produce the desired results. An alternative and arguably more promising approach is to investigate the social capital of potential locations before establishing production plants. Even in highly industrialized areas such as the EU and the US the national



differences in percentage of people who reply that other persons can generally be trusted are sizable (Sweden 65% vs. Romania 17% in the EU; North Dakota 62% vs. Mississippi 18% in the US; (Algan and Cahuc 2013)). Local culture thus becomes a competitive advantage that promotes (or inhibits) the location of new firms and the performance of resident organizations.

## References

- Algan, Y., P. Cahuc. 2010. Inherited trust and growth. *The American Economic Review* 2060-2092.
- Algan, Y., P. Cahuc. 2013. Trust, growth and well-being: new evidence and policy implications *Handbook of Economic Growth*, 49-120.
- Arrow, K.J. 1972. Gifts and Exchanges. *Philos Public Aff* **1**(4) 343-362.
- Badura, B., W. Greiner, P. Rixgens, M. Ueberle, M.S. Behr. 2008. *Sozialkapital: Grundlagen von Gesundheit und Unternehmenserfolg*. Springer, Heidelberg.
- Belsley, D.A., E. Kuh, R.E. Welsch. 2005. *Regression diagnostics: Identifying influential data and sources of collinearity*. John Wiley & Sons.
- Bianchi, E.C., J. Brockner. 2012. In the eyes of the beholder? The role of dispositional trust in judgments of procedural and interactional fairness. *Organizational Behavior and Human Decision Processes* **118**(1) 46-59.
- Bloom, N., R. Sadun, J. Van Reenen. 2012. The Organization of Firms Across Countries\*. *The Quarterly Journal of Economics* **127**(4) 1663-1705.
- Böckerman, P., P. Ilmakunnas. 2012. The job satisfaction-productivity nexus: A study using matched survey and register data. *Industrial & Labor Relations Review* **65**(2) 244-262.
- Brown, S.P., S.K. Lam. 2008. A meta-analysis of relationships linking employee satisfaction to customer responses. *Journal of Retailing* **84**(3) 243-255.
- Bryson, A., J. Forth, L. Stokes. 2014. Does worker wellbeing affect workplace performance? Department for Business, Innovation and Skills.
- Buerker, M., G.A. Minerva. 2013. Civic capital and the size distribution of plants: Short-run dynamics and long-run equilibrium. *Journal of Economic Geography* 43.
- Crescenzi, R., L. Gagliardi, M. Percoco. 2013. Social capital and the innovative performance of Italian provinces. *Environment and Planning A* **45**(4) 908 – 929.
- Crisp, C.B., S.L. Jarvenpaa. 2013. Swift trust in global virtual teams: Trusting beliefs and normative actions. *Journal of Personnel Psychology* **12**(1) 45.
- De Jong, B.A., K.M. Bijlsma-Frankema, L.B. Cardinal. 2014. Stronger Than the Sum of Its Parts? The Performance Implications of Peer Control Combinations in Teams. *Organization Science* **25**(6) 1703-1721.
- De Jong, B.A., T. Elfring. 2010. How does trust affect the performance of ongoing teams? The mediating role of reflexivity, monitoring, and effort. *Acad Manage J* **53**(3) 535-549.
- Fukuyama, F. 1995. *Trust: The social virtues and the creation of prosperity*. Free press New York.
- Georgellis, Y., T. Lange. 2012. Traditional versus secular values and the job–life satisfaction relationship across Europe. *British Journal of Management* **23**(4) 437-454.
- Georgellis, Y., T. Lange, S. Fargher, S. Kesting, T. Lange, G. Pacheco. 2008. Cultural heritage and job satisfaction in Eastern and Western Europe. *International Journal of Manpower* **29**(7) 630-650.
- Guiso, L., P. Sapienza, L. Zingales. 2008. Long term persistence. National Bureau of Economic Research.
- Hutcheson, G., N. Sofroniou. 1999. *The Multivariate Social Scientist*. Sage Publications, Thousand Oaks, CA.
- Koys, D.J. 2001. The effects of employee satisfaction, organizational citizenship behavior, and turnover on organizational effectiveness: A unit-level, longitudinal study. *Personnel psychology* **54**(1) 101-114.
- La Porta, R., F. Lopez-De-Silanes, A. Shleifer, R.W. Vishny. 1997. Trust in large organizations. *Am Econ Rev* **87**(2) 333.
- Liou, K.-T., R.D. Sylvia, G. Brunk. 1990. Non-work factors and job satisfaction revisited. *Human Relations* **43**(1) 77-86.
- Millán, J.M., J. Hessels, R. Thurik, R. Aguado. 2013. Determinants of job satisfaction: a European comparison of self-employed and paid employees. *Small Business Economics* **40**(3) 651-670.

- Miller, G.J., A.B. Whitford. 2002. Trust and Incentives in Principal-Agent Negotiations The 'Insurance/Incentive Trade-Off'. *J Theor Polit* **14**(2) 231-267.
- Morrone, A., N. Tontoranelli, G. Ranuzzi. 2009. How Good is Trust?
- Mowday, R.T., L.W. Porter, R. Steers. 1982. Organizational linkages: The psychology of commitment, absenteeism, and turnover. San Diego, CA: Academic Press.
- Nahapiet, J., S. Ghoshal. 1998. Social capital, intellectual capital, and the organizational advantage. *Academy of management review* **23**(2) 242-266.
- Putnam, R.D. 1993. The prosperous community: Social capital and public life. *The American Prospect* **4**.
- Requena, F. 2003. Social capital, satisfaction and quality of life in the workplace. *Social indicators research* **61**(3) 331-360.
- Rixgens, P. 2010. Messung von Sozialkapital im Betrieb durch den „Bielefelder Sozialkapital-Index“ (BISI) *Fehlzeiten-Report 2009*. Springer, 263-271.
- Rothstein, B., D. Stolle. 2008. The state and social capital: An institutional theory of generalized trust. *Comparative Politics* 441-459.
- Sagie, A. 1998. Employee absenteeism, organizational commitment, and job satisfaction: Another look. *Journal of vocational behavior* **52**(2) 156-171.
- Salancik, G.R., J. Pfeffer. 1977. An examination of need-satisfaction models of job attitudes. *Administrative science quarterly* 427-456.
- Sousa-Poza, A., A.A. Sousa-Poza. 2000. Well-being at work: a cross-national analysis of the levels and determinants of job satisfaction. *The journal of socio-economics* **29**(6) 517-538.
- Tabellini, G. 2010. Culture and institutions: economic development in the regions of Europe. *Journal of the European Economic Association* **8**(4) 677-716.
- Van Deth, J.W. 2003. Measuring social capital: orthodoxies and continuing controversies. *International Journal of Social Research Methodology* **6**(1) 79-92.
- Watson, G.W., S.D. Papamarcos. 2002. Social capital and organizational commitment. *Journal of business and psychology* **16**(4) 537-552.
- Westlund, H., R. Bolton. 2003. Local social capital and entrepreneurship. *Small business economics* **21**(2) 77-113.

Appendix

**Table A. 1: Formulation and codification of questions on Civic Social Capital**

Dimension	Question	Coding
Associational Activity	How often do you engage in activities in following type of groups: sports club	Never (1) /less than once a month (2) / more than once a month and less than once per week (3) / more than once per week (4)
	How often do you engage in activities in following type of groups: religious organization	
	How often do you engage in activities in following type of groups: cultural or educational group	
	How often do you engage in activities in following type of groups: social services	
	How often do you engage in activities in following type of groups: activist group	
	How often do you engage in activities in following type of groups: political organization	
Strong Ties	How often do you interact with the following type of people: parents and siblings	Never (1) /less than once a month (2) / more than once a month and less than once per week (3) / more than once per week (4)
	How often do you interact with the following type of people: close friends	
Social Trust	Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?	1 (can't be too careful/take advantage/looking out for themselves) – 10 (most people trusted, try to be fair, try to be helpful)
	Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?	
	Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?	
Institutional Trust	How much do you personally trust each of the following institution: national parliament	1 (no trust at all) – 10 (completely trust)
	How much do you personally trust each of the following institution: national justice system	
	How much do you personally trust each of the following institution: European parliament	
	How much do you personally trust each of the following institution: European justice system	
	How much do you personally trust each of the following institution: regional parliament	
	How much do you personally trust each of the following institution: regional government	
	How much do you personally trust each of the following institution: United Nations	

**Table A. 2: Formulation and codification of questions related to Workplace Social Capital**

Dimension	Question	Coding
Employee Networks	In our firm the other employees are willing to stand up for one another to a high degree.	Strongly disagree (1) – Strongly agree (5)
	Mostly we colleagues have a good atmosphere among ourselves.	
	In our firm we stick together.	
	If the need arises, one can rely on one's fellow employees.	
	In our firm the quality of mutual trust is such that we can also talk about personal problems.	
	In our firm the other employees are willing to stand up for one another to a high degree.	
Leadership Trust	My direct superior provides the workers in our department with important information on a regular base.	Strongly disagree (1) – Strongly agree (5)
	My direct superior is a person who can be trusted.	
	My direct superior takes care that workers are able to advance in their career.	
	My direct superior treats all employees equally and fairly.	
	My direct superior is a true role model.	
Workforce Norms	Conflicts and differences in opinion are dealt with objectively and fairly.	Strongly disagree (1) – Strongly agree (5)
	All our firm's departments have a high degree of team spirit.	
	Managers and employees align their daily activities with a set of common norms and values.	
	Everyone in our firm has a common vision and perspective concerning how the organization is supposed to develop in future.	
	In general, I have the impression that in our firm staff are treated fairly and with respect.	

**Table A. 3: Formulatin and codification of questions related to Work Related Attidues**

Dimension	Question	Coding
Wage Satisfaction	Given your work performance, how adequate do you perceive your income to be?	Not at all (1) / Not very (2) / Somewhat (3) / Very (4)
Job Satisfaction	All in all, how satisfied would you say you are with your job?	Not at all satisfied (1) – Completely satisfied (10)
Organizational Commitment	I am willing to work harder than I have to in order to help this organization succeed.	Strongly disagree (1) – Strongly agree (5)
	I feel very little loyalty to this organization.	
	I would take almost any job to keep working for this organization.	
	I find that my values and the organization's are very similar.	
	I am proud to be working for this organization.	
	I would turn down another job for more pay in order to stay with this organization.	

**Table A. 4: Loadings profile and communalities from principal components analysis of Civic Social Capital questions (Varimax Rotation)**

Communalities			Component					
			<i>Instit. Trust Nation</i>	<i>Social Trust</i>	<i>Instit. Trust Region</i>	<i>Strong Ties</i>	<i>Olson Groups</i>	<i>Putnam Groups</i>
Associational Activity	Sporting Groups	.523	.094	.059	-.259	.225	.041	.625
	Religious Groups	.547	-.163	.037	.366	-.074	-.042	.614
	Cultural/Educational Groups	.461	.062	.069	.007	-.047	.216	.635
	Social Service Groups	.293	-.144	.103	.193	.072	.461	.082
	Activist Groups	.547	.032	-.021	-.082	.022	.733	.040
	Political Groups	.517	.078	.030	-.032	-.022	.709	.076
Social Trust	Most people trusted	.641	.191	.754	.132	.063	.102	.067
	Most people fair	.696	.112	.814	.137	-.027	-.005	.039
	Most people helpful	.599	.110	.762	.009	.057	.026	.054
Institutional Trust	National Parliament	.603	.754	.155	-.021	.016	.020	-.096
	National Justice System	.682	.796	.192	.004	-.061	.009	-.094
	European Parliament	.767	.812	.069	.294	.049	.029	.110
	European Justice System	.746	.790	.125	.316	.029	.000	.074
	Regional Parliament	.854	.422	.185	.798	.019	.061	-.029
	Regional Government	.843	.382	.186	.813	.026	.021	-.025
	United Nations	.603	.620	-.003	.402	.087	-.111	.193
Strong Ties	Interaction with parents and siblings	.638	.023	.026	.100	.787	.013	-.085
	Interaction with close friends	.668	.014	.051	-.069	.799	.045	.143
Explained Variance			18.5	11	10.8	7.478	7.409	7.203
Explained Variance Accumulated			18.5	29.5	40.3	47.77	55.17	62.38

**Table A. 5: Descriptive statistics and correlations of Civic Social Capital, Workplace Social Capital, Work-related Attitudes and Control Variables (S.D.: Standard Deviation)**

	Mean	S.D.	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Institutional Trust Nation	0.000	1.000	.139**	.082*	.047	.018	.176**	.036	-.068	.067	-.011	-.073*	-.029	.018	-.034
2 Social Trust	0.000	1.000	.236**	.108**	.105**	.188**	.095**	.016	.035	.075*	-.001	.009	-.045	-.067	.098**
3 Institutional Trust Region	0.000	1.000	.123**	.119**	.173**	.180**	-.040	-.009	-.050	-.078*	-.039	-.048	-.064	.084*	-.055
4 Strong Ties	0.000	1.000	.024	.059	-.031	-.041	.079*	.096**	-.266**	.020	.001	-.188**	-.015	.077*	-.086*
5 Olson Groups	0.000	1.000	.022	-.004	-.014	.011	.025	-.175**	.015	.024	-.026	.071*	.081*	-.017	.075*
6 Putnam Groups	0.000	1.000	.051	-.006	.053	.039	.015	-.014	.011	.034	-.047	.078*	-.014	-.018	.054
7 WSC Index	55.085	12.682	1	.285**	.463**	.649**	-.067*	-.040	-.132**	-.145**	-.087*	-.134**	-.028	.096**	-.016
8 Wage Satisfaction	2.962	0.743		1	.286**	.237**	.017	.009	.006	-.041	-.007	.018	-.035	-.039	.165**
9 Job Satisfaction	7.908	1.527			1	.535**	-.071*	.028	.052	-.038	-.050	.015	-.005	.032	.090**
10 Organizational Commitment	0.000	1.000				1	-.087**	-.021	.025	-.141**	-.089**	.015	.009	.029	.064
11 Education	2.605	0.965					1	.111**	-.086**	.318**	.058	.009	.024	-.045	.242**
12 Sex (Female)	0.564	0.496						1	.003	.273**	-.103**	-.039	-.486**	.083*	-.392**
13 Age	45.511	10.986							1	.137**	.062	.596**	-.076*	-.181**	.206**
14 Public Sector	0.404	0.491								1	-.026	.201**	-.129**	.038	.006
15 Size of Organization	114.481	263.758									1	.109**	.102**	-.103**	.111**
16 Affiliation with Org.	15.383	11.181										1	.060	-.297**	.305**
17 Full-time Contract	0.652	0.476											1	-.057	.497**
18 Temporary Contract	0.176	0.381												1	-.189**
19 Salary	2.736	1.241													1

\*. Correlation is significant at the 0.05 level (2-tailed); \*\*. Correlation is significant at the 0.01 level (2-tailed).

University of Innsbruck - Working Papers in Economics and Statistics  
Recent Papers can be accessed on the following webpage:

<http://eeecon.uibk.ac.at/wopec/>

- 2015-12 **Christoph Hauser:** Effects of employee social capital on wage satisfaction, job satisfaction and organizational commitment
- 2015-11 **Thomas Stöckl:** Dishonest or professional behavior? Can we tell? A comment on: Cohn et al. 2014, Nature 516, 86-89, “Business culture and dishonesty in the banking industry”
- 2015-10 **Marjolein Fokkema, Niels Smits, Achim Zeileis, Torsten Hothorn, Henk Kelderman:** Detecting treatment-subgroup interactions in clustered data with generalized linear mixed-effects model trees
- 2015-09 **Martin Halla, Gerald Pruckner, Thomas Schober:** The cost-effectiveness of developmental screenings: Evidence from a nationwide programme
- 2015-08 **Lorenz B. Fischer, Michael Pfaffermayr:** The more the merrier? Migration and convergence among European regions
- 2015-07 **Silvia Angerer, Daniela Glätzle-Rützler, Philipp Lergetporer, Matthias Sutter:** Cooperation and discrimination within and across language borders: Evidence from children in a bilingual city
- 2015-07 **Silvia Angerer, Daniela Glätzle-Rützler, Philipp Lergetporer, Matthias Sutter:** Cooperation and discrimination within and across language borders: Evidence from children in a bilingual city
- 2015-06 **Martin Geiger, Wolfgang Luhan, Johann Scharler:** When do Fiscal Consolidations Lead to Consumption Booms? Lessons from a Laboratory Experiment
- 2015-05 **Alice Sanwald, Engelbert Theurl:** Out-of-pocket payments in the Austrian healthcare system - a distributional analysis
- 2015-04 **Rudolf Kerschbamer, Matthias Sutter, Uwe Dulleck:** How social preferences shape incentives in (experimental) markets for credence goods *forthcoming in Economic Journal*
- 2015-03 **Kenneth Harttgen, Stefan Lang, Judith Santer:** Multilevel modelling of child mortality in Africa
- 2015-02 **Helene Roth, Stefan Lang, Helga Wagner:** Random intercept selection in structured additive regression models



- 2015-01 **Alice Sanwald, Engelbert Theurl:** Out-of-pocket expenditures for pharmaceuticals: Lessons from the Austrian household budget survey
- 2014-32 **Esther Blanco, Tobias Haller, James M. Walker:** Externalities in appropriation: Responses to probabilistic losses
- 2014-31 **Michael Kirchler, Stefan Palan:** Friendliness pays off! Monetary and immaterial gifts in consumer-salesperson interactions
- 2014-30 **Alice Sanwald, Engelbert Theurl:** Out-of-pocket expenditures of private households for dental services - Empirical evidence from Austria
- 2014-29 **Stefan Borsky, Esther Blanco:** Setting one voluntary standard in a heterogeneous Europe - EMAS, corruption and stringency of environmental regulations
- 2014-28 **Eberhard Feess, Christian Grund, Markus Walzl, Ansgar Wohlschlegel:** Competing trade mechanisms and monotone mechanism choice
- 2014-27 **Esther Blanco, E. Glenn Dutcher, Tobias Haller:** To mitigate or to adapt? Collective action under asymmetries in vulnerability to losses
- 2014-26 **Alice Sanwald, Thomas Schober:** Follow your heart: Survival chances and costs after heart attacks - An instrumental variable approach
- 2014-25 **Eric Mayer, Sebastian R uth, Johann Scharler:** Total factor productivity and the propagation of shocks; Empirical evidence and implications for the business cycle
- 2014-24 **Susanne Berger, Herbert Stocker, Achim Zeileis:** Innovation and institutional ownership revisited: An empirical investigation with count data models
- 2014-23 **James C. Cox, Rudolf Kerschbamer, Daniel Neururer:** What is trustworthiness and what drives it?
- 2014-22 **Michael Kirchler, Caroline Bonn, J rgen Huber, Michael Razen:** The “Inflow-Effect” - Trader inflow and bubble formation in asset markets *forthcoming in European Economic Review*
- 2014-21 **Silvia Angerer, Daniela Gl tzle-R tzler, Philipp Lergepporter, Matthias Sutter:** Donations, risk attitudes and time preferences: A study on altruism in primary school children *forthcoming in Journal of Economic Behavior and Organization*
- 2014-20 **Christian Kleiber, Achim Zeileis:** Visualizing count data regressions using rootograms

- 2014-19 **Matthias Siller, Christoph Hauser, Janette Walde, Gottfried Tappeiner:** [The multiple facets of regional innovation](#)
- 2014-18 **Carmen Arguedas, Esther Blanco:** [On fraud and certification of corporate social responsibility](#)
- 2014-17 **Achim Zeileis, Christoph Leitner, Kurt Hornik:** [Home victory for Brazil in the 2014 FIFA World Cup](#)
- 2014-16 **Andreas Exenberger, Andreas Pondorfer, Maik H. Wolters:** [Estimating the impact of climate change on agricultural production: accounting for technology heterogeneity across countries](#)
- 2014-15 **Alice Sanwald, Engelbert Theurl:** [Atypical employment and health: A meta-analysis](#)
- 2014-14 **Gary Charness, Francesco Feri, Miguel A. Meléndez-Jiménez, Matthias Sutter:** [Experimental games on networks: Underpinnings of behavior and equilibrium selection](#) *slightly revised version forthcoming in Econometrica*
- 2014-13 **Uwe Dulleck, Rudolf Kerschbamer, Alexander Konovalov:** [Too much or too little? Price-discrimination in a market for credence goods](#)
- 2014-12 **Alexander Razen, Wolfgang Brunauer, Nadja Klein, Thomas Kneib, Stefan Lang, Nikolaus Umlauf:** [Statistical risk analysis for real estate collateral valuation using Bayesian distributional and quantile regression](#)
- 2014-11 **Dennis Dlugosch, Kristian Horn, Mei Wang:** [Behavioral determinants of home bias - theory and experiment](#)
- 2014-10 **Torsten Hothorn, Achim Zeileis:** [partykit: A modular toolkit for recursive partytioning in R](#)
- 2014-09 **Rudi Stracke, Wolfgang Höchtel, Rudolf Kerschbamer, Uwe Sunde:** [Incentives and selection in promotion contests: Is it possible to kill two birds with one stone?](#) *forthcoming in Managerial and Decision Economics*
- 2014-08 **Rudi Stracke, Wolfgang Höchtel, Rudolf Kerschbamer, Uwe Sunde:** [Optimal prizes in dynamic elimination contests: Theory and experimental evidence](#) *forthcoming in Journal of Economic Behavior and Organization*
- 2014-07 **Nikolaos Antonakakis, Max Breitenlechner, Johann Scharler:** [How strongly are business cycles and financial cycles linked in the G7 countries?](#)
- 2014-06 **Burkhard Raunig, Johann Scharler, Friedrich Sindermann:** [Do banks lend less in uncertain times?](#)

- 2014-05 **Julia Auckenthaler, Alexander Kupfer, Rupert Sendlhofer:** The impact of liquidity on inflation-linked bonds: A hypothetical indexed bonds approach *published in North American Journal of Economics and Finance*
- 2014-04 **Alice Sanwald, Engelbert Theurl:** What drives out-of pocket health expenditures of private households? - Empirical evidence from the Austrian household budget survey
- 2014-03 **Tanja Hörtnagl, Rudolf Kerschbamer:** How the value of information shapes the value of commitment or: Why the value of commitment does not vanish
- 2014-02 **Adrian Beck, Rudolf Kerschbamer, Jianying Qiu, Matthias Sutter:** Car mechanics in the lab - Investigating the behavior of real experts on experimental markets for credence goods *forthcoming in Journal of Economic Behavior and Organization*
- 2014-01 **Loukas Balafoutas, Adrian Beck, Rudolf Kerschbamer, Matthias Sutter:** The hidden costs of tax evasion - Collaborative tax evasion in markets for expert services *forthcoming in Journal of Public Economics*

University of Innsbruck

Working Papers in Economics and Statistics

2015-12

Christoph Hauser

Effects of employee social capital on wage satisfaction, job satisfaction and organizational commitment

**Abstract**

The article proposes that basic social attitudes and associational networks of employees influence their interaction with coworkers and managers at the workplace and thereby also shape work attitudes and behavior. Two terms are introduced to analyze this hypothesis: Civic Social Capital (denoting personal trust and associational activity) and Workplace Social Capital (social interaction with colleagues and trust towards management). Based on a survey of 1007 employees I demonstrate the impact of social trust and two forms of institutional trust (confidence towards national and regional institutions) on a composite index of workplace social capital. In addition, social and institutional trust also influence work related attitudes such as perception of a fair wage, job satisfaction and organizational commitment. Once workplace social capital is controlled for in regressions on work related attitudes, social trust becomes insignificant. Thus, workplace social capital serves as a transmission mechanism converting social trust in enhanced rates of both wage/job satisfaction and in particular organizational commitment. In contrast, confidence towards regional institutions exerts a sustained impact on work related attitudes that persists alongside the impact of social interaction with colleagues and management.

ISSN 1993-4378 (Print)

ISSN 1993-6885 (Online)