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The Impact of Organizational Social Capital on Innovativeness, Creativity, Engagement, and Work Satisfaction

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1 INTRODUCTION

Efforts made by employees inside an organization are inextricably linked with the organization's performance. In this sense, organizational relationships, a company's structure, and policies, as well as the characteristics of workers to adapt to the work environment play a significant role (NAHAPIET & GOSHAL, 1998). Among the main outcomes of this dynamic is the quality of organizational relationships, which allows firms to respond effectively to customer demands and competing actions. In order to better understand these previously mentioned behaviors that have occurred within any enterprise, the literature has considered them as elements of organizational social capital, innovation, creativity, engagement, and work satisfaction, which when taken together help us to understand how individuals bounce back from adverse situations and achieve positive outcomes.

In recent years, it has become increasingly obvious that research on the empirical measurement of organizational social capital does not adopt a single approach. There are some studies that do not provide any breakdown of structural, related or cognitive dimensions; instead, the strength of organizational social capital is determined by a set of statements (scales), which are often is noteworthy, however, that there is a group of statements (PÉREZ-LUÑO et al., 2011) that do not divide organizational social capital into dimensions but cover all three dimensions.t divide them into dimensions. Another part of the study (MAURER & EBERS, 2006; CHOW & CHAN, 2008; FANDIÑO et al., 2015; AKRAM et al., 2017; HA & NGUYEN, 2020) measured organizational social capital from a cognitive-relational-structural perspective, but the divisions and elements of the dimension are not identified. Accordingly, the measure of the structural dimension in this situation is usually related to connectedness, social and work networks (JAWORSKI & KOHLI, 1993; INKPEN & TSANG, 2005) measured by statements related to trust, whereas the measure of relationships is based on scales of `common vision` (TSAI & GHOSHAL, 1998). The studies in the third group use a much more complex approach than in the first two groups: the measurement of organizational social capital or a cognitive-relational-structural three-dimensional approach with the division of dimensions into divisions and elements (GANGULY, TALUKDAR, & CHATTERJEE, 2019) or in other multidimensional approaches other than the structural-relationship-cognitive model (JAMSHIDI & KENARSARI, 2015). The theoretical basis of the research is developed in accordance with the cognitive-relational-structural three-dimensional model, with the division of measurements into professional divisions and elements of capital, which provides an integrated approach to measuring organized social capital. The breakdown of capital into elements is also important because it provides an opportunity to study the individual impact of each element of capital on employee satisfaction, creativity, and autonomy, as well as innovation.

Thus, there is no consensus among researchers regarding the structure and content of organizational social capital. There is a lack of empirical research regarding the validity of specific models in terms of their key constituent elements. As a result, there has been no attempt made in the literature to determine the nature of the interaction between the dimensions of organizational social capital. The present study extends recent literature on organizational social capital acceptance by validating the influence of workplace environment-related factors.

2 LITERATURE OVERVIEW: CONCEPTUALIZING AND COMPARING ELEMENTS OF RESEARCH MODEL

2.1 Organizational social capital (OSC) - a brief description

As previously indicated, this research work is taken as a basic structural definition contends that organizational social capital consists of structural components (overall relationship pattern between actors or relationships among employees), relational (characteristics of personal relationships within the network of trust among employees) and cognitive dimensions (shared meanings and values among network participants) components (NAHAPIET & GHOSHAL, 1998; INKPEN & TSANG, 2005). The next step is to discuss the literature which supports our`s model consideration of each of the three main OSC elements mentioned above.

2.1.1 Cognitive dimension of OSC

The norms, values, attitudes, and beliefs that influence cooperation are forms of cognitive social capital (UPHOFF & WIJAYARATNA, 2000). The nature of social capital in this context is more internal and subjective (UPHOFF, 2000). Or relates to the understandings that arise from organizational membership, including organizational identification (KROLL, DEHART-DAVIS, & VOGEL, 2019). As the context in which collective action takes place, cognitive social capital is formed by the broader organizational mission and values (ANDREWS, 2010A). This cognitive dimension refers to those resources in a social system that lead to shared representations, interpretations and systems of meaning (NAHAPIET & GHOSHAL, 1998). Therefore, that could be determined by the degree to which colleagues have a shared understanding of their work tasks and their collaboration. In a number of studies, shared goals have also been considered to be a key construct of cognitive capital (e.g. CHOW & CHAN, 2008; FATHI, EZE, & GOH, 2011), or even suggested as a common definition of social capital (ENGBERS, THOMPSON & SLAPER, 2017).

The conclusion that can be drawn from these arguments, as well as the one on which the dissertation will be based, is that the *cognitive dimension plays a fundamental role in determining the very nature of all organizational behaviors.* In other words, this is the initial root cause of everything that is discussed

regarding OSC. It is reflected in proposed model by the acceptance of common goals among employees, which is expressed as one subdimension - *Shared goals (SHG).*

2.1.2 Relational dimension of OSC

The relational dimension refers to 'those assets created and leveraged through relationships' (NAHAPIET & GHOSHAL, 1998, p. 244). Essentially, it focuses on the quality of relationships between actors (KROLL, DEHART-DAVIS & VOGEL, 2019). In this regard, the *relational dimension consists of OSC elements that define working relationships*. Based on the literature reviewed in this research, three key things stand out: *(1) Trust & reciprocity (TRUST); (2) Willingness to knowledge sharing (KS); (3) Justice & fairness (FRNS).*

2.1.3 Structural dimension of OSC

According to NAHAPIET & GHOSHAL (1998), the structural dimension OSC is the pattern of connections between actors within a social system. A discussion of this topic has been developed in structural theories of social capital in particular the role played by the patterns and configurations of social ties. HEZLETT & GIBSON (2007), for instance, propose that individuals whose social ties span gaps in otherwise unconnected networks benefit from the diverse information they have access to and can use. Thus, the structural dimension of social capital may refer to aspects of organizational climate that aid these interactions and networks (WAH et al., 2005).

In the opinion of many researchers, the *OSC structural dimension is essentially an amalgamation of the elements that define the constructive working relationships themselves*. This understanding will serve as the basis for future discussions. To further develop the proposed vision, the following elements have been included in this dimension based on the research literature: *(1) Perceived managerial support (MNGSP); (2) Teamwork (TW); (3) Colleagues support (CLGSP); (4) Interpersonal relations (PSR).*

2.2 The elements of a constructive work environment

An organization's work environment is determined by the perception of its employees and is also considered an attribute of the entire organization (FOSS, WOLL & MOILANEN, 2013). Aside from the fact that the presence and interaction of elements of organizational social capital is extremely positive for any organization, there are also elements of the working environment that are not part of its structure, but which can nonetheless be considered desirable outcomes (outputs) (HODSON, 2005; DANCHEV, 2006; POTTS, 2007). An appropriate definition for these elements would be 'Elements of a constructive work environment'. In this regard, the present study suggests that the constructive work

environment is mediated by four attributes: *work satisfaction, engagement, creativity & autonomy, and innovativeness.*

3 OBJECTIVES TO ACHIEVE

3.1 Aims and Research Questions

A major goal of this study is to develop the concept of organizational social capital, propose a theoretical model that can be used to measure the structure and strength of organizational social capital, and empirically prove the model. In addition, one of the objectives of this study is to advance organizational social capital research by looking not only at the direct effects on constructive elements of the work environment, but also to consider the order in which desirable behavior emerges within organizational social capital.

The following research questions have been formulated.

1. What are the structural elements of organizational social capital, and how do they interact?

2. Is it possible to predict work environment elements such as work engagement, work satisfaction, idea implementation, opportunity exploration, autonomy, and creativity based on the dimensions of organizational social capital?

3. In what ways do the effects of determining factors of the organizational environment differ depending on the sector, company size, and position of the respondent?

3.2 Scientific Research Model and Hypotheses proposed in the current study

Figure 1 explains the final research model of this study suggests positive associations between organizational social capital and employee satisfaction, as well as creativity and innovation. Three-dimensional measures are used to measure the power of organized social capital: structural, relational, and cognitive. According to the model, the structural dimension, which includes working relationships, is represented by four elements: perceived management support, employee support, teamwork, and interpersonal relationships. The element of social capital is measured by trust and reciprocity, as well as willingness to share knowledge and constructs of justice and integrity. Cognitive capital is assessed in terms of shared goals and values.
Each hypothesis is represented within the conceptual model. Additionally, the direction of the relationships is shown in addition to the paths among the variables.

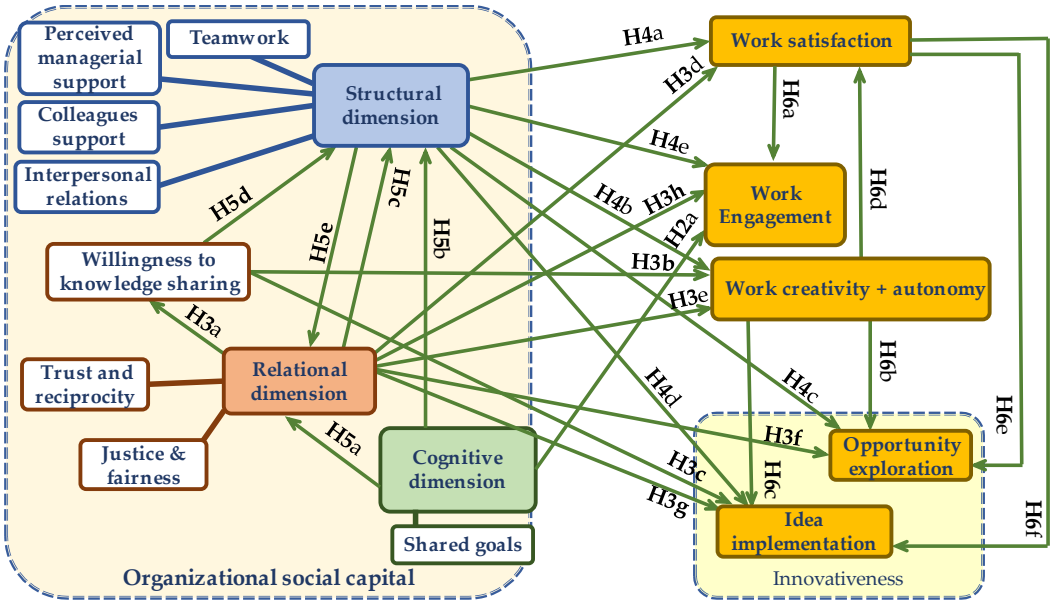

Figure 1. Finalized Research Model
Source: Author's own construction

Based on the research model, dimensions of OSC are predictors of most of the other study dimensions (innovativeness, creativity, engagement, and work satisfaction). Following are the development of key concepts and hypotheses related to the conceptual model.

3.2.1 Variations in elements of the working environment based on the sector, company size, and employee's position (H1)

First, previous research has shown that different considerations for any research model may be influenced by the sector, size of the company, and position of the respondent (e.g., BORISOV & VINOGRADOV, 2019A; BORISOV & VINOGRADOV, 2019B). Because of this, the study included as control variables the respondent's position (manager or boss/subordinate employee); company size (6-9 people/10-49 people/50-249 people/250 or more) and sector focus (public/private/non-profit).

H1 Accordingly, the following hypothesis was formulated: *Organizational social capital strength, innovativeness, creativity, engagement, and work satisfaction differ depending on the sector, company size, and position of the respondent.*

As a next step, this study (Hypothesizes H2-H6) will analyze the direct and indirect relationships between elements of organizational social capital and other dimensions of a constructive workplace. As the definitions of organizational social capital presented in the literature are far from complete, it has been decided to focus on the subdimensionality level in the theoretical constructions.

3.2.2 Influence of cognitive organizational social capital on elements of work engagement (H2)

Several prior studies have examined the role of shared goals in generating engagement (e.g., CRAIG & SILVERSTONE, 2009; MACEY & SCHNEIDER, 2008).

H2 Therefore, the followings were hypothesized: *Cognitive organizational social capital can be considered as an influential predictor of elements of the working environment*

3.2.3 Influence of relational organizational social capital on elements of the working environment (H3)

This hypothesis is based on eight propositions identified in the literature analysis (FUJISHIRO, 2005; ASGARI *et al*., 2008; GUINOT, CHIVA & ROCA-PUIG, 2014; ZHAO *et al*., 2018; AKHAVAN & MAHDI HOSSEINI, 2015; CUGUERÓ-ESCOFET, FICAPAL-CUSÍ & TORRENT-SELLENS, 2019; OBRENOVIC *et al*., 2020; LIU, KELLER, & BARTLETT, 2021).

Proposition H3a: Relational OSC → Willingness to knowledge sharing
Proposition H3b: Willingness to knowledge sharing →Work autonomy & creativity
Proposition H3c: Willingness to knowledge sharing → Idea implementation (Innovativeness)
Proposition H3d: Relational OSC → Work satisfaction
Proposition H3e: Relational OSC → Work autonomy & creativity
Proposition H3f & Proposition H3g: Relational OSC → Opportunity exploration (Innovativeness) & H3h Relational OSC → Idea implementation (Innovativeness)
Proposition H3h: Relational OSC → Engagement

H3 Our argument, therefore, is as follows: *Relational OSC can be considered as an influential predictor of elements of the working environment.*

3.2.4 Influence of structural organizational social capital on elements of the working environment (H4)

A literature analysis identified five assumptions that support this hypothesis (GHENGHESH, 2013; MUÑOZ-DOYAGUE & NIETO, 2012; LI, WOOD & THOMAS, 2017; ORGAMBÍDEZ-RAMOS & DE ALMEIDA, 2017; STEPHANOU & GIOGALI, 2020; GINTING & SIBURIAN, 2019; YANG, & ZHANG, 2021).

Proposition H4a: Structural OSC → Work satisfaction
Proposition H4b: Structural OSC → Work autonomy & creativity

Proposition H4c: Structural OSC → Opportunity exploration (Innovativeness)
Proposition H4d: Structural OSC → Idea implementation (Innovativeness)
Proposition H4e: Structural OSC → Work engagement

H4 This led to the formulation of the following hypothesis: *Structural OSC can be considered as an influential predictor of elements of the working environment.*

3.2.5 Organizational social capital elements can be categorized based on their hierarchical structure, according to the theoretical research model (H5)

This hypothesis is supported by five assumptions identified in a literature review (CROPANZANO & BENSON III, 2011; HAYTON, CARNABUCI & EISENBERGER, 2012; GROEN, 2018; SONG *et al*., 2019; HUANG *et al*., 2020; LAACK, 2021).
Proposition H5a: Shared goals → Relational OSC
Proposition H5b: Shared goals → Structural OSC
Proposition H5c: Relational OSC → Structural OSC
Proposition H5d: Willingness to knowledge sharing → Structural OSC
Proposition H5e: Structural OSC → Relational OSC

H6 In light of this, the following hypothesis was formulated: *Organizational social capital elements can be categorized based on their hierarchical structure, according to the theoretical research model.*

3.2.6 Mutual influence of the elements of the working environment (H6)

According to a literature review, this hypothesis is supported by six assumptions (LEBOW & SIMON, 1997; BARON & TANG, 2011; SACHELI, AGLIOTI & CANDIDI, 2015; FREEMAN & AUSTER, 2015; HUGHES *et al*., 2018; RUOTSALAINEN, JANTUNEN & SINERVO, 2020; SUENDARTI, WIDODO & HASBULLAH, 2020).
Proposition H6a: Work satisfaction → Work engagement
Proposition H6b & H6c: Work autonomy and creativity → Opportunity exploration (Innovativeness) Work autonomy and creativity → Idea implementation (Innovativeness)
Proposition H6d: Work autonomy and creativity → Work satisfaction
Proposition H6e: Work satisfaction → Opportunity exploration (Innovativeness)
Proposition H6f: Work satisfaction → Idea implementation (Innovativeness)

H6 Accordingly, the following hypothesis has been proposed: *Within the framework of the considering model, the predicted elements of the working environment, such as work engagement, work satisfaction, idea implementation,*

opportunity exploration, autonomy & creativity, have positive interactions with one another.

4 METERIALS AND METHODS

4.1 Sampling Procedure and Description of the Sample

Measures & Instrument development

Following the back translation methodology developed by BRISLIN (1970), all the scale items were translated into Hungarian with the assistance of Hungarian colleagues. During this process, it is taken into consideration that cultural differences may affect the semantic equivalence of different versions of the questionnaire (SCHAFFER & RIORDAN, 2003).
In order to convert the items into a survey format, they were written as declarative statements that contained an active verb, referred to employees' workplace experiences, and could be rated on a 5-point frequency scale from Totally Agree to Totally Disagree. The scores for all classes of relationships are reported as the means of the constituent items.
There were twelve key groups of questions that were used to construct the main variables of the study: perceived managerial support, teamwork, colleagues support, interpersonal relations, trust & reciprocity, willingness to knowledge sharing, justice & fairness, shared goals, work satisfaction, innovativeness, work creativity & autonomy, and work engagement.

Data collection

Respondents comprised a random sample of full-time workers employed by organizations or entrepreneurs with at least one other colleague. Participants were invited to complete an online survey between March and April 2022.
There were 438 responses to the survey. It was decided to exclude incomplete responses (failure to complete more than half of the full items) and those who failed screening questions, as well as follow-up questions, from further analysis. This resulted in only 405 responses, allowing them to be analysed.

Description of the Sample

The generalized characteristics of the organizations from which the data were collected are as follows. Depending on the number of employees, these organizations are grouped into five categories: 0 to 4; 5 to 9; 10 to 49; 50 to 249; and 250 or more. The 56.3% of the sample consisted of organizations with more than 250 employees. The organizations belong to three different activity (industrial) sectors, and the majority are service organizations. In addition, these organizations are grouped into three different business sectors, and the majority are private companies. Prior to the recent period, the majority of organizations (93.8%) had been in operation for more than 10 years.

4.2 Data Analysis

The constructs identified based on the literature review in the conceptual model subsequently validated by conducting a confirmatory factor analysis (CFA) as a part of structural equation modeling (SEM). A reflective measurement model was used to indicate the contribution of each item to its associated construct (GARSON, 2016). For every item, no less than 0.6 factor loading was used as a criteria.

In accordance with recommendation of MALHOTRA & BIRKS (2018), the Cronbach`s coefficient for all constructs exceeded 0.6, meaning that the constructs are reliable.

Convergent validity and reliability of latent constructs were also assessed using average variance extracted (AVE) and composition reliability (CR). AVE is the share of total variance explained by the latent construct, a number greater than 0.5 is a generally accepted level of convergent validity (HAIR et al., 2009, BAUMGARTNER & HOMBURG, 1996). In construction reliability (CR), the common variance ratio of statements (items) belonging to the construct is expressed. Generally, CR higher than 0.7 is considered a good level of reliability (HAIR et al., 2009). Latent structures are considered reliable if the value of AVE does not exceed the threshold value of 0.5, but the composition reliability exceeds the threshold value of 0.7 (FORNELL & LARCKER, 1981; HENSELER, RINGLE & SINKOVICS, 2009; LAM, 2012; HAIR et al., 2017).

Additionally, Cronbach's alpha represents the lower limit of internal consistency reliability, while composite reliability represents the upper limit. HAIR et al. (2017) suggest that the true reliability may lie between Cronbach's Alpha and composite reliability. It is therefore necessary to report both Cronbach's alpha and composite reliability. Since Cronbach's alpha has some limitations, the composite reliability of the constructs will be primarily used to assess the internal consistency of the constructs.

Structural equation modeling (SEM) was applied to test hypothesized causal effects between OSC dimensions and elements of collaborative work environments. The model fit was deemed acceptable if $\chi 2/df \leq 5$ (PODSAKOFF et al., 2003), since comparative fit index (CFI), and Tucker-Lewis index (TLI) values were > 0.90 and Root-mean-square error approximation (RMSEA) < 0.08 (HU & BENTLER, 1999; STEINMETZ et al., 2009; CIECIUCH et al., 2014; SCHWARTZ & BUTENKO, 2014).

In order to determine if there were any differences in distribution of values of research dimensions among groups based on the business sector (public, private, non-profit) and the organization size (5-9 employees, 10-49 employees, 50-249 employees, 250 employees or more), the Kruskal−Wallis test was used. In the case of a significant result of the Kruskal−Wallis test, the groups showing significant differences were determined using the Dunn−Bonferroni post hoc test. The Friedman test was used to examine the differences in the evaluation of the

research dimensions. In order to examine differences between managers and subordinates, the Mann−Whitney test was applied.
The statistical analyses were conducted using IBM Statistics SPSS Version 25 and AMOS Graphics Version 23.0.

5 RESULTS AND DISCUSSION

5.1 Validity and Reliability of Measurement (Outer) Model

Descriptive statistics of items and examined dimensions

Willingness to knowledge sharing has the highest mean value (4.12) among the elements of organizational social capital (Appendix 8.3, Table 3). In OSC, the lowest mean value (2.99) is associated with the cognitive dimension (Shared goals). In terms of the Justice and fairness dimension, the respondent showed the lowest agreement (2.74) with the item: "My organization rewards employees according to their performance".

Internal Consistency Reliability

Further, all Cronbach's alpha values lie between 0.609 and 0.919, indicating acceptable reliability, with Cronbach's alpha for Interpersonal relations (alpha = 0.690) and Perceived managerial support (alpha = 0.919) lower than 0.70 but greater than 0.60.
Convergent Validity
The degree to which a measure correlates positively with alternative measures of the same construct is known as convergence validity. In order to determine whether a data set is converging, the average variance extracted (AVE) is used, which represents the cumulative mean of squared outer loadings from a group of items of a latent variable. AVE scores should equal or exceed 0.50, indicating that the construct accounts for more than half of its own variance (HAIR et al., 2017). All values of AVE are greater than 0.50 (Appendix 8.3, Tables 3,4). As such, the requirements for convergent validity have been met.

5.2 Variations in elements of the working environment based on the sector, company size, and employee's position (H1)

The hypothesis was tested with the Mann-Whitney test, Kruskal-Wallis test, and Dunn-Bonferroni post-hoc test
The radial diagrams are presented below in order to clarify and generalize the results of the first hypothesis test. The results that are significant are highlighted in bold in each diagram.
(1) Depending on the position of the respondents, significant differences were observed in their assessments of aspects of the working environment (see Figure 2. Comparing the positions of respondents based on the mean values of the examined dimensions). According to Mann-Whitney test results there is a

significant difference between manager and subordinate perception of five out of thirteen examined dimensions: Perceive managerial support, Willingness to knowledge sharing, Work creativity and autonomy, Idea implementation, Work engagement.

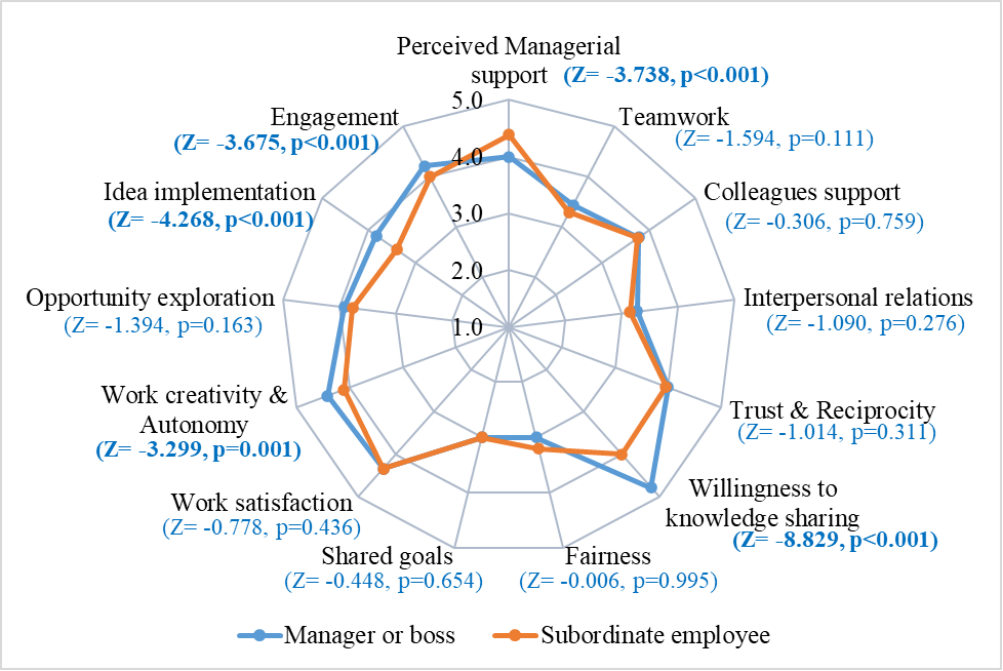

Figure 2. Comparing the positions of respondents based on the mean values of the examined dimensions
Source: Author's own construction

(2) According to the Kruskal-Wallis test and Dunn-Bonferroni post hoc test results (Figure 3), there is a significant difference among sectors in each of the thirteen dimensions evaluated.

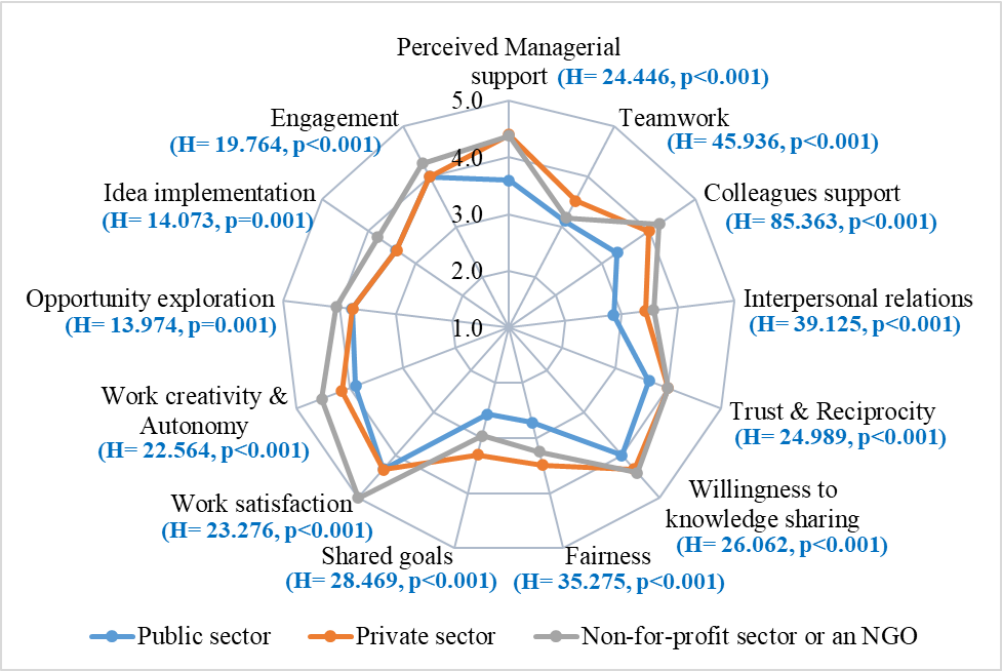

Figure 3. Comparing the sectors based on the mean values of the examined dimensions
Source: Author's own construction

(3) According to Kruskal-Wallis and Dunn-Bonferroni post hoc tests (Figure 4), seven out of thirteen dimensions examined show significant differences depending on the organization size: Perceive managerial support, Colleagues support, Interpersonal relationship, Trust & reciprocity, Willingness to knowledge sharing, Justice & fairness, Shared goals.

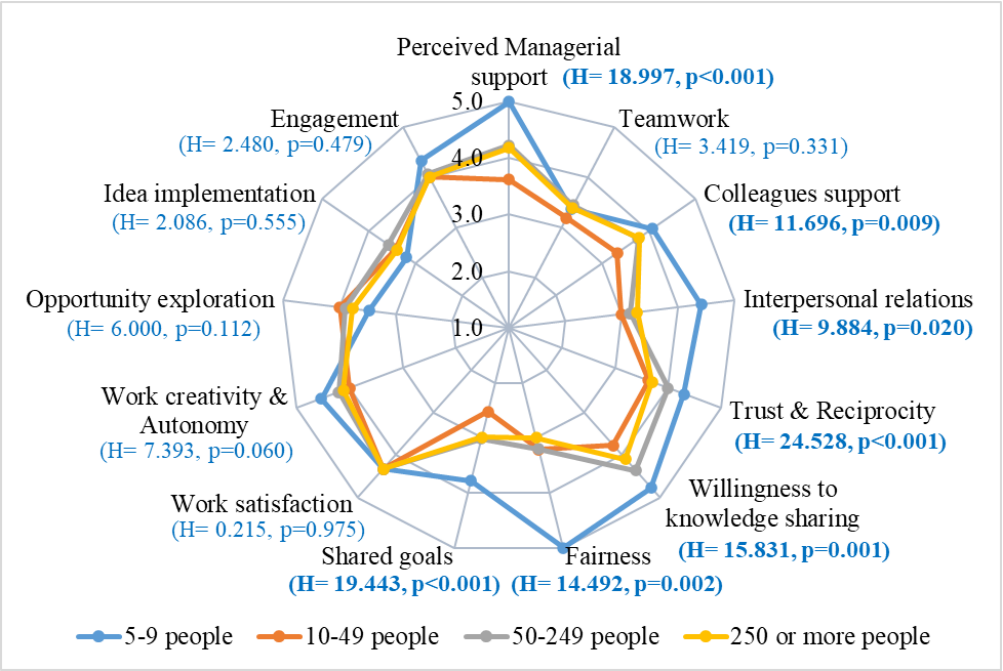

Figure 4. Comparison of the size groups of enterprises based on the mean values of the dimensions examined
Source: Author's own construction

These results support all perceptions with ***full support for Hypotheses 1***.

The causal pathways hypotheses

According to the causal pathway's hypothesis (H2 – H6), the different forms of social capital predicted other forms of social capital and elements of a constructive work environment.

5.3 Influence of cognitive organizational social capital on work engagement (H2)

In light of the results (β= 0.076; S.E.= 0.039; p=0.151), ***Hypothesis 2 does not appear to be supported***.

5.4 Influence of relational organizational social capital on elements of the working environment (H3)

Proposition H3a: Relational OSC → Willingness to knowledge sharing

This proposition was supported by findings. Relational organizational social capital gravitated toward 'Willingness to knowledge sharing' (β= 0.303; S.E.= 0.051; p<0.001). It is consistent with the findings of the following authors: POLITIS, 2003; WICKRAMASINGHE & WIDYARATNE, 2012; AKHAVAN, & MAHDI HOSSEINI, 2015.

Proposition H3b & H3c: Willingness to knowledge sharing →Work autonomy & creativity & Willingness to knowledge sharing → Idea implementation (Innovativeness)

There is support for both these propositions in the findings. 'Willingness to knowledge sharing' predicted 'Work autonomy & creativity' (β= 0.389; S.E.= 0.063; p<0.001), and 'Idea implementation' (β= 0.141; S.E.= 0.071; p=0.002). These results add to existing findings (MURA et al., 2016; LIU, KELLER, & BARTLETT, 2021).

Proposition H3d: Relational OSC → Work satisfaction

Findings support this proposition. Similar results were obtained by GUINOT, CHIVA & ROCA-PUIG (2014).

Proposition H3e: Relational OSC → Work autonomy & creativity

This proposition was not supported by findings. The results of SAETHER (2020) were similar.

Proposition H3f Relational: OSC → Opportunity exploration (Innovativeness)

This proposition was supported by findings, but in a specifical (opposite) way: (β= -0.489; S.E.= 0.150; p=<0.001).

This effect was explained by the following authors: GARGIULO & BENASSI, 1999; CLEGG et al., 2002; FEDOR, CALDWELL & HEROLD, 2006; JIAO & ZHAO, 2014.

Proposition H3g: Relational OSC → Idea implementation (Innovativeness)

This proposition was not supported by the findings, and part of the general argumentation is provided in the comments associated with the proposition above.

Proposition H3h: Relational OSC → Engagement

It was found that this proposition was not supported by the findings.

Some generalized information regarding the testing of hypothesis 3 is provided in table 5 (see Appendices). *Thus, the **Hypothesis 3 just partly supported**.*

5.5 Influence of structural organizational social capital on elements of the working environment (H4)

Five explicable links have been identified as part of this hypothesis.

Propositions H4a & H4b: Structural OSC → Work satisfaction and Structural OSC → Work autonomy & creativity

The findings did not support these propositions.

Proposition H4c: Structural OSC → Opportunity exploration (Innovativeness)

Based on the findings, this proposition can be supported. This finding appears to be consistent with previous research (HUNTER & CUSHENBERY, 2011; BASU, PRADHAN & TEWARI, 2017).

Proposition H4d: Structural OSC → Idea implementation (Innovativeness)

According to the findings, the proposition was not supported. It is evident in this case that the effects of organizational social capital may be contradictory in certain circumstances. Literature provides an explanation for this phenomenon (e.g., HANSEN, 1998; FAY et al., 2015).

Proposition H4e: Structural OSC → Work engagement

The findings of the study did not support the proposition (β= 0.186; S.E.=0.096; p=0.071).

In table 5, the overall results of testing hypothesis 4 are presented (see Appendices).

*Due to the above findings, it can be concluded that **Hypothesis 4 is only partially supported**.*

5.6 Organizational social capital elements can be categorized based on their hierarchical structure, according to the theoretical research model (H5)

Proposition H5a: Shared goals → Relational OSC

This proposition was supported by the findings of the study. In line with previous research, this finding is quite consistent (CUGUERÓ-ESCOFET, FITÓ BERTRAN & ROSANAS, 2019; SONG et al., 2019; HUANG et al., 2020).

Proposition H5b: Shared goals → Structural OSC

Cognitive social capital formed by 'Shared goals' is fully explanatory for Relational OSC (β= 0.651; S.E.=0.053; p<0.001) as well as Structural OSC (β= 0.194; S.E.=0.076; p=0.041).

Proposition H5c: Relational OSC → Structural OSC

According to the findings of the study, this proposition is supported. This finding is very consistent with previous studies that have been conducted (POLITIS, 2003; WILLEM & SCARBROUGH, 2006; HALBESLEBEN & WHEELER, 2015).

Proposition H5d: Willingness to knowledge sharing → Structural OSC

Research results confirm the causal relationship between intention to knowledge sharing and structural organizational social capital, which is specified in the proposed model (β= 0.092; S.E.= 0.048; p=0.025). This is similar to the results of the following authors: REN, KRAUT & KIESLER, 2007; GOLDEN & RAGHURAM, 2010; ZHANG & NG, 2012.

Proposition H5e: Structural OSC → Relational OSC

This proposition appears to be supported by the results of the study. The structural OSC has had limited effects on a relational OSC (β= 0.244; S.E.=0.081; p=0.006).

Thus ***Hypothesis 5 is supported by the data***. Results of hypothesis 5 testing can be found in table 5 (see Appendices).

Nonetheless, it is worthwhile to consider not only the fact of hierarchy, but also the sequence of its elements. In order to increase clarity, it may be necessary to make a conditional simplification and provide an element of the research model that includes only the ratios of the dimensions of organizational social capital. Figure 5 displays this simplified ratio of elements.

In the chain of Cognitive OSC → Structural OSC → Relational OSC, there is a connection, but it is weak. While at the same time, the chain of Cognitive OSC → Relational OSC → Structural OSC can be thought of as medium-strong or moderate in strength. Hence, according to the research model, organizational social capital is hierarchically subordinated or aligned according to the second scenario rather than the other way around.

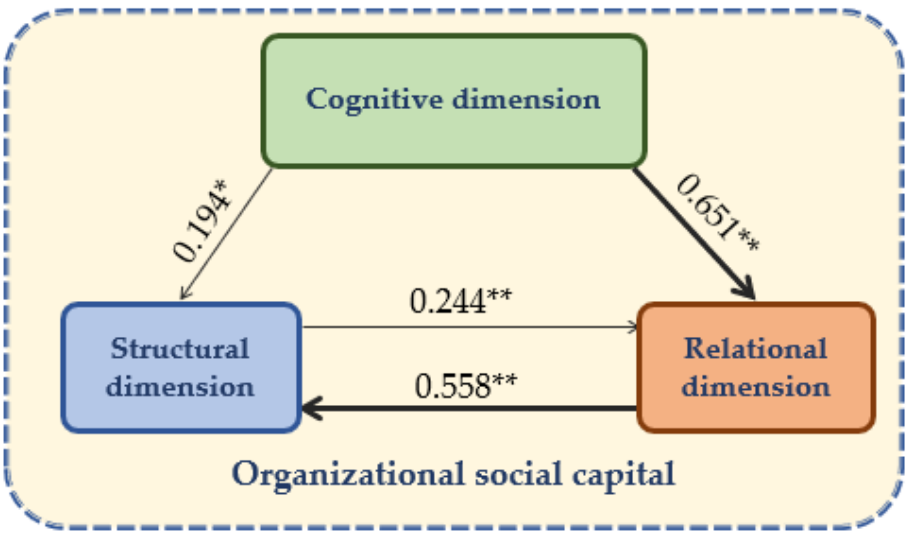

Figure 5. Clipping from path diagram illustrating significant paths among organizational social capital elements

Note: Based on the standardized regression coefficient, the line patterns (dashed line, thin line, medium solid line, solid line) indicate the strength of effects: non-significant, low, medium, and strong.

Source: Author's own construction

5.7 Mutual influence of the elements of the working environment (H6)

Proposition H6a: Work satisfaction → Work engagement

This proposition was confirmed (β= 0.732; S.E.=0.080; p=<0.001). As has been suggested in several other studies (SAKS, 2006; DJOEMADI et.al, 2019), employee satisfaction plays a role in determining employee engagement at work.

Proposition H6b & H6c: Work autonomy and creativity → Opportunity exploration (Innovativeness) and Work autonomy and creativity → Idea implementation (Innovativeness)

Defining both elements of innovativeness by 'Work autonomy & creativity' is a strong and confident statement (opportunity exploration: β= 0.877; S.E.=0.278; p=<0.001; idea implementation: β= 0.904; S.E.=0.279; p=<0.001). Accordingly, the findings of the study contribute to the literature of AMABILE (1997), BARON & TANG (2011), and HUGHES et al. (2018).

Proposition H6d: Work autonomy and creativity → Work satisfaction

Based on the results of the study, this proposition appears to be supported (β= 0.387; S.E.=0.158; p=<0.001). This is similar to the results of the following authors: PARJANEN (2012) and TORRANCE (2018).

Propositions H6e & H6f Work satisfaction → Opportunity exploration (Innovativeness) & Work satisfaction → Idea implementation (Innovativeness)

The findings did not support these propositions.

Test results for hypothesis 6 are presented in table 5 (see Appendices). At the end of the analysis, it must be concluded that ***Hypothesis 6 can be partially supported***.

6 CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND FUTURE DIRECTIONS

6.1 Conclusions

The study was conducted according to a concept that identifies three dimensions of organizational social capital: cognitive, relational, and structural. The multidimensional scale has been developed and tested through a series of exploratory and confirmatory studies, which show that it is reliable and valid.

Despite a significant number of subdimensions, in the sequel, this structure has shown high internal validity based on the proposed model. It is therefore possible for researchers to rely on the instrument to investigate the presence and implications of organizational social capital, as well as how this capital may affect the constructive elements of the organizational environment.
The sequence of processes leading to organizational social capital formation has been explored. The use of structural equation modeling has demonstrated that the dimensions of organizational social capital are mutually influenced. The cognitive element determines the relational; and the relational element is the predominant structural element of organizational social capital. A framework such as this may also serve as a foundation for the conduct of further empirical research on the subject of organizational social capital.
Furthermore, it is worth pointing out that the role of organizational social capital has not been extensively researched in English-speaking literature in Hungary to date. As such, the study may be the first to develop an integrative perspective on organizational social capital within Hungarian organizations.
Most of the hypothesized relationships were strongly supported by the path analysis. In the course of the study, the following findings were also confirmed with modest confirmation in the existing literature:
– The importance of structural organizational social (i.e. essentially, the relationship itself) in the development of innovative opportunities exploration has been demonstrated;
– It was shown that relational organizational social capital had the reverse (negative) effect on the emergence of innovative opportunities exploration;
– An individual's level of work satisfaction has a significant impact on the formation of their level of engagement at work;
– It has become apparent that the willingness to share knowledge is an important predictor of creativity in the workplace and autonomy;
– Relational organizational social capital was shown to be beneficial in forming work satisfaction;
– An important predictor of work satisfaction was creativity and autonomy in the workplace;
– Creativity and autonomy in the workplace strongly or very strongly predetermine innovation in the workplace.
In addition, it was clearly demonstrated that there are differences among sectors, industries, company sizes, and positions in an organization in terms of the comparative evaluation parameters of elements of the working environment.

6.2 Recommendations

The findings of this study indicate that the favorable aspects of social capital largely outweigh the potential `dark side`. Consequently, it would be beneficial

for organizations to consider setting up additional efforts to promote social capital as a means of building constructive working relationships.

Based on the research model, it appears that the cognitive dimension of organizational social capital is the primary source of other elements of social capital. This sequence helps to understand the dynamics of organizational social capital and remove all barriers that could impede its growth.

It is extremely crucial for organizations to have employees with inner intentions to high levels of organizational social capital and retain the employees that exhibit the required behaviors.

Regarding the development of the other elements of a constructive work environment, the following can be clearly noted in the framework of the research model. To facilitate the exploration of opportunities as part of innovation, managers may assign more resources in order to enhance the organizational structural capital of the organization. Work satisfaction can be improved and sustained through strategies or initiatives that promote relational organizational social capital, i.e., trust and reciprocity in the workplace, as well as fairness and justice. Based on additional assessments of work needs, working and managing assets, practitioners could propose intervention strategies to increase work engagement, innovation, creativity, and employee satisfaction.

Considering that many researchers and business analysts agree that high levels of innovativeness are beneficial to organizations, it is crucial to pay attention to the findings of this study. It has been shown that policies that increase structural elements of organizational social capital can influence opportunity explorations. On the other hand, the relational aspect of organizational social capital prevents it from being strengthened. This implies the significance of placing emphasis when selecting a particular development strategy and highlighting the need to maintain balance in developing the social capital of the organization.

Comparative analyses of various parameters depending on the sector, size, and position of the respondent in connection with the work environment are explicit and promising for managers from all sectors of the Hungarian economy. Essentially, the results stimulate a differentiated and, therefore, accurate approach to management.

Political actors in transition economies and countries with similar cultures who wish to improve their competitiveness may also benefit from the results. By implementing laws and regulations related to the organizational environment, they will be able to develop strategies to enhance employee creativity, sustain organizational innovation, and increase employee engagement and satisfaction within the organization.

The general findings of the study emphasize the importance of organizations investing in the development of a positive working environment. Particularly it implies the need for managers and employees to set aside time for reflection and dialogue.

7 NEW SCIENTIFIC RESULTS

1. This research proposes a novel conceptualization of organizational social capital and empirically proves the validity of the proposed model. Particularly, a research tool for measuring organizational social capital has been developed and tested, and a hierarchical relationship has been identified between its elements.
2. It was shown that there are differences in the comparative evaluation parameters of the elements of the working environment depending on the sector, company size, and position in an organization.
3. The findings of empirical research supported the effect of structural organizational social capital on the exploration of innovative opportunities.
4. Research has shown that relational organizational social capital has a negative impact on the emergence of innovative opportunities.

Moreover, the following findings have been confirmed and developed, which are incompletely presented in the literature.

5. An individual's level of work satisfaction has a significant impact on the formation of their level of engagement at work.
6. Relational organizational social capital was shown to significantly contribute to forming work satisfaction. The willingness to share knowledge has been proven to be an important predictor of workplace creativity and autonomy.
7. This empirical research has shown that creativity and autonomy in the workplace are significant predictors of work satisfaction. Creativity and autonomy strongly or very strongly predetermine workplace innovation.

8 APPENDICES

8.1 References

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8.2 **Table 3.** Descriptive statistics of items, internal reliability and convergent validity of the first-order constructs

Code	Construct/Items	Mean (SD)	Loadings	Cronbach's α	AVE	CR
	Perceived managerial support	**3.81 (1.11)**		**0.919**	**0.758**	**0.967**
1.MNSP	My supervisor provides me with clear expectations of my work responsibilities	3.75 (1.22)	0.799			
2.MNSP	My supervisor is supportive when I have a work problem.	3.99 (1.21)	0.909			
3.MNSP	My supervisor treats my mistakes as a problem to be solved rather than a focus for criticism	3.87 (1.26)	0.884			
4.MNSP	My supervisor explains the reasoning behind decisions that affect me	3.60 (1.38)	0.902			
5.MNSP	My supervisor communicates with me in an open and direct manner	3.82 (1.29)	0.855			
	Teamwork	**3.44 (0.95)**		**0.830**	**0.665**	**0.934**
1.TW	My company encourages employee teamwork.	3.24 (1.16)	0.866			
2.TW	Teamwork is part of the problem-solving process at my company.	3.46 (1.19)	0.873			
3.TW	I feel I am really a part of the group of people I work with	3.68 (1.13)	0.698			
4.TW	There is team spirit among employees in this organization	3.49 (1.08)	0.812			
	Colleagues support	**3.72 (0.82)**		**0.784**	**0.617**	**0.919**
1.CLSP	In our team, we openly share our thoughts without fear of rejection	3.82 (1.07)	0.773			
2.CLSP	I can rely upon my coworkers especially when things get tough at work	3.96 (0.92)	0.862			
3.CLSP	My work team is one of the most meaningful social groups to which I belong	3.25 (1.19)	0.735			
4.CLSP	Frequently, my colleagues offered me assistance when the situation called for it	3.75 (1.04)	0.767			
	Interpersonal relations	**3.23 (0.88)**		**0.609**	**0.574**	**0.874**
1.PSR	The company provides training to improve the interpersonal skills of employees to build good relationships	2.78 (1.36)	0.699			

2.PSR	Personal relationships in our company encourage a trustful working environment.	3.46 (1.08)	0.857			
3.PSR	I look forward to being with the people I work with each day	3.34 (1.03)	0.707			
	Trust & reciprocity	**3.77 (0.80)**		**0.807**	**0.722**	**0.935**
1.TRUST	There is mutual friendship between employees	3.71 (0.94)	0.844			
2.TRUST	Employees have confidence in one another in this organization	3.59 (1.00)	0.894			
3.TRUST	Employees in this organization show a great deal of integrity	4.07 (0.86)	0.808			
	Willingness to knowledge sharing	**4.12 (0.64)**		**0.633**	**0.613**	**0.890**
1.WKS	I actively share my professional knowledge with my colleagues	4.34 (0.78)	0.870			
2.WKS	I share my ways to solve problems at the request of other group members	4.50 (0.68)	0.819			
3.WKS	I am quite often attempting to convince people to support an innovative idea	3.09 (1.10)	0.642			
	Justice & fairness	**3.14 (1.04)**		**0.882**	**0.743**	**0.955**
1.FRNS	My organization treats its employees fairly	3.16 (1.16)	0.878			
2.FRNS	My organization rewards employees according to their performance	2.74 (1.20)	0.889			
3.FRNS	Employees in my organization are rewarded fairly	2.99 (1.34)	0.852			
4.FRNS	Employees can count on being treated with courtesy and respect in my organization	3.74 (1.10)	0.826			
	Shared goals	**2.99 (0.94)**		**0.896**	**0.763**	**0.960**
1.SHG	In my organization, employees share the same ambitions and vision for the organization	2.80 (1.12)	0.891			
2.SHG	In my organization, employees enthusiastically pursue collective goals and mission	2.97 (1.06)	0.925			
3.SHG	There is a commonality of purpose among employees in this organization	3.06 (1.06)	0.811			
4.SHG	Employees in this organization are committed to the goals of the organization	3.15 (1.03)	0.863			
	Work satisfaction	**4.27 (0.72)**		**0.806**	**0.537**	**0.857**
1.STSF	The work I do on my job is meaningful to me	4.17 (0.85)	0.848			

2.STSF	I feel I am being paid a fair amount for the work I do*	3.25 (1.27)	0.442 *			
3.STSF	When I do a good job, I receive the recognition for it that I should receive*	3.36 (1.33)	0.526 *			
4.STSF	I like doing the things I do at work	4.13 (0.87)	0.849			
5.STSF	I feel a sense of pride in doing my job	4.51 (0.82)	0.851			
Work creativity & autonomy		**4.04 (0.72)**		**0.753**	**0.412**	**0.821**
1.CRTV	I really enjoy a task that involves coming up with new solutions to problems	4.46 (0.70)	0.610			
2.CRTV	The job provides me with significant autonomy in making decisions	3.97 (1.00)	0.818			
3.CRTV	The job allows me to make decisions about what methods I use to complete my work	4.13 (1.00)	0.829			
4.CRTV	I often generate creative ideas	3.86 (0.95)	0.538			
5.CRTV	If I believe in an idea, no obstacle will prevent me from making it happen	3.81 (1.05)	0.730			
Opportunity exploration (Innovativeness)		**3.73 (0.77)**		**0.853**	**0.558**	**0.913**
1.INNV	Often, I look for ways to improve a process, technology, product, service, or work relationship	3.67 (1.02)	0.844			
2.INNV	I often recognize opportunities to make a positive difference in work or organization	3.72 (0.86)	0.830			
3.INNV	It is common for me to pay attention to non-routine issues in work	3.86 (0.90)	0.793			
5.INNV	It's quite often that I'm seeking out new working methods, techniques, or instruments	3.52 (1.02)	0.848			
11.INNV	Frequently, I put effort into developing new things	3.99 (0.96)	0.654			
Idea implementation (Innovativeness)		**3.43 (0.87)**		**0.899**	**0.665**	**0.945**
6.INNV	Experimenting with new work ideas and solutions is often on my agenda	3.41 (1.02)	0.860			
7.INNV	Quite often, I evaluate the strengths and weaknesses of new work ideas	3.39 (1.05)	0.816			
9.INNV	Quite often, I push ideas forward so that they can be implemented	3.27 (1.05)	0.830			
12.INNV	I often contribute to the implementation of novel ideas	3.73 (0.94)	0.836			

14.INNV	Often, I incorporate new ideas for improving an existing process, technology, product or service	3.34 (1.06)	0.879			
	Engagement	**3.92 (0.81)**		**0.851**	**0.535**	**0.886**
1.ENGM	Trying to constantly improve my job performance is very important to me*	4.29 (0.80)	0.394 *			
2.ENGM	I find the work that I do full of meaning and purpose	4.21 (0.88)	0.838			
3.ENGM	Time flies when I am working	4.06 (1.01)	0.870			
4.ENGM	My job inspires me	3.78 (0.97)	0.837			
5.ENGM	When I get up in the morning, I feel like going to work	3.55 (1.03)	0.757			

* The item was eliminated from the model due to low loading

Source: own calculations

8.3 **Table 4.** Second-order constructs

Dimensions	Mean (SD)	Loadings	Cronbach's α	CR	AVE
Structural OSC	3.53 (0.77)		0.833	0.854	0.473
Perceived Managerial support	3.81 (1.11)	0.644			
Teamwork	3.44 (0.95)	0.770			
Colleagues_support	3.72 (0.82)	0.661			
Interpersonal_relations	3.23 (0.88)	0.752			
Relational OSC	3.62 (0.63)		0.654*	0.831	0.499
Trust & reciprocity	3.77 (0.80)	0.794			
Justice & fairness	3.14 (1.04)	0.735			
Willingness to knowledge sharing**	4.12 (0.64)	0.571			
Cognitive OSC (Shared goals) * **	2.99 (0.94)		–		

*Pearson's correlation coefficient

**Based on the theoretical model, this element is related to Relational OSC, but shows low consistency with the other two elements, so it was not included in Relational OSC; ***Despite being a first-order construct, the Cognitive OSC is included in the comparison table as a completely equivalent construct within the research model

Source: own calculations

8.4 **Table 5.** Path analysis and hypotheses testing

	Hypothesis/assumption	Standardized Regression Coefficient (β)	S.E. (Standard error)	p	Conclusion
H2	**Cognitive OSC →**				**Not supported**
H2a	Shared goals → Engagement	0.076	0.039	0.151	Not supported
H3	**Relational OSC →**				**Partly supported**
H3a	Relational OSC → Willingness to knowledge sharing	0.303	0.051	<0.001	Supported
H3b	Willingness to knowledge sharing →Work autonomy & creativity	0.389	0.063	<0.001	Supported
H3c	Willingness to knowledge sharing → Idea implementation (Innovativeness)	0.141	0.071	0.002	Supported
H3d	Relational OSC → Work satisfaction	0.484	0.132	0.001	Supported
H3e	Relational OSC → Work autonomy & creativity	0.321	0.139	0.250	Not supported
H3f	Relational OSC → Opportunity exploration (Innovativeness)	-0.489	0.150	<0.001	Supported
H3g	Relational OSC → Idea implementation (Innovativeness)	-0.142	0.133	0.121	Not supported
H3h	Relational OSC → Engagement	0.058	0.080	0.456	Not supported
H4	**Structural OSC →**				**Partly supported**
H4a	Structural OSC → Work satisfaction	-0.323	0.137	0.056	Not supported
H4b	Structural OSC → Work autonomy & creativity	-0.476	0.170	0.203	Not supported
H4c	Structural OSC → Opportunity exploration (Innovativeness)	0.651	0.153	<0.001	Supported
H4d	Structural OSC → Idea implementation (Innovativeness)	0.179	0.156	0.127	Not supported
H4e	Structural OSC → Work engagement	0.186	0.096	0.071	Not supported
H5	**Cognitive OSC → Relational OSC → Structural OSC**				**Supported**
H5a	Shared goals → Relational OSC	0.651	0.053	<0.001	Supported
H5b	Shared goals → Structural OSC	0.194	0.076	0.041	Supported
H5c	Relational OSC → Structural OSC	0.558	0.132	<0.001	Supported
H5d	Willingness to knowledge sharing → Structural OSC	0.092	0.048	0.025	Supported
H5e	Structural OSC → Relational OSC	0.244	0.081	0.006	Supported
H6	**The elements of the working environment have positive interactions with one another**				**Supported**
H6a	Work satisfaction → Work engagement	0.732	0.080	<0.001	Supported
H6b	Work autonomy and creativity → Opportunity exploration (Innovativeness)	0.877	0.278	<0.001	Supported
H6c	Work autonomy and creativity → Idea implementation (Innovativeness)	0.904	0.279	<0.001	Supported
H6d	Work autonomy and creativity → Work satisfaction	0.387	0.158	<0.001	Supported
H6e	Work satisfaction → Opportunity exploration (Innovativeness)	0.072	0.090	0.275	Not supported
H6f	Work satisfaction → Idea implementation (Innovativeness)	-0.080	0.119	0.266	Not supported

Source: own calculations

8.5 List of publications

SCIENTIFIC JOURNAL ARTICLES

BORISOV, I., VINOGRADOV, S. (2019): The Effect of Collaboration-oriented Managerial Environment on Employee Job Satisfaction. *VADYBA (Journal of Management)*, 35(2), 39-48. ISSN 1648-7974/ (online), ISSN 2424-399X.

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BORISOV, I., VINOGRADOV, S. (2022): Examining the Components of Organizational Social Capital in Hungarian Companies. *VADYBA (Journal of Management),* 38(2), 28-37. ISSN 1648-7974/ (online), ISSN 2424-399X**.**

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POOR, J., VINOGRADOV S., **BORISOV, I**., Linge, D., Szobi, Á. (2017): Russia. In: POÓR, J., ENGLE, A.D., BREWSTER, Ch. (Edit.): *HRM in transition-practices of MNC-Subsidiaries in Central and Eastern Europe, Russia and Kazakhstan* (2015-2016), J. Selye University (Komarno-Slovakia), 193-215. ISBN: 978-80-8122-151-4, EAN: 9788081222184.

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