

# Hungarian University of Agriculture and Life Sciences

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

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Doctoral (PhD) dissertation

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## **ABBREVIATIONS**

| AVE            | Average variance extracted          |
|----------------|-------------------------------------|
| CFA            | Confirmatory factor analysis        |
| CLGSP          | Colleagues support                  |
| CR             | Composite reliability               |
| CRTV           | Work creativity & autonomy          |
| CMV            | Common method variance              |
| EFA            | Exploratory factor analysis         |
| ENGM           | Work engagement                     |
| FRNS           | Justice & fairness                  |
| HR             | Human resources                     |
| INNV           | Innovativeness                      |
| MNGSP          | Perceived managerial support        |
| OSC            | Organizational social capital       |
| PSR            | Interpersonal relations             |
| S.E.           | Standard error                      |
| SCC            | Cognitive social capital            |
| SCR            | Relational social capital           |
| SCS            | Structural social capital           |
| SEM            | Structural equation modeling        |
| SHG            | Shared goals                        |
| STSF           | Work satisfaction                   |
| TRUST          | Trust & reciprocity                 |
| TW             | Teamwork                            |
| WKS            | Willingness to knowledge sharing    |
| α/ alpha       | Cronbach's alpha                    |
| $\beta$ / beta | Standardized regression coefficient |
|                |                                     |

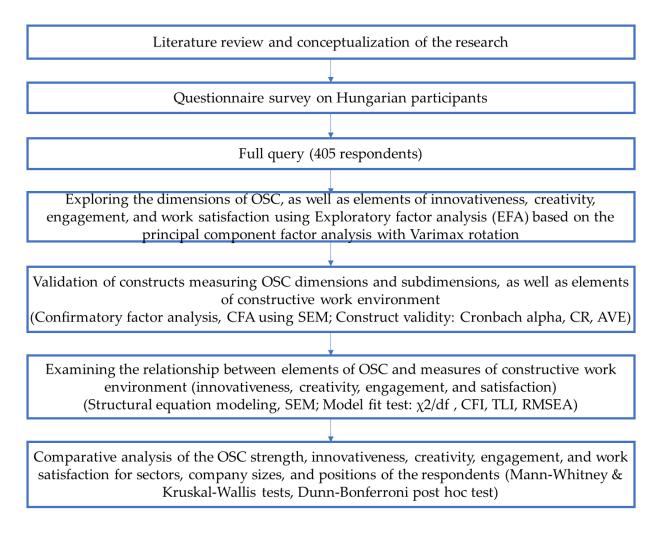
#### **1** INTRODUCTION

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 & GHOSHAL, 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. Another part of the studies (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.

## **1.1** Research Procedure – Flow Chart

Figure 1 presents a flowchart which is a graphical representation of the research process. A comprehensive literature analysis is provided in chapters two and three of the dissertation to provide a deeper understanding of the above topics. Detailed analysis and depiction of the points of connection and potential interdependencies between the individual topics are provided.



### **Figure 1. Research Flow Chart**

Source: Author's own construction

As part of the research, an online questionnaire was used to gain direct insights into organizational social capital and the elements of a constructive working environment, as well as investigate established hypotheses based on the literature review. Through the use of the questionnaire provided, this data was measured and quantified objectively and then analyzed statistically. The quantitative research resulted in a summary of the data that was used for further analysis. As for the analysis of several categorical variables in the questionnaire, such as subdimensions and dimensions of OSC, firm size or sector and so forth, descriptive statistics such as frequencies were conducted using the tool Amos from SPSS v.24 for the research model. Detailed information can be found in chapter four.

### **1.2** Problem Statement and Justification

The present study extends recent literature on organizational social capital acceptance by validating the influence of workplace environment-related factors. Currently, 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. In part, this problem is related to the difficulty of measuring social capital due to its complexity, which is not conducive to traditional quantitative techniques. The quantitative analysis involves reductions and assumptions that obfuscate the complexity of organizational social capital relationships (MARKOWSKA-PRZYBYLA, 2012; ENGBERS, THOMPSON & SLAPER, 2017).

As a consequence, the following problem appears. Even in cases of theoretical understanding and adoption of novel concepts in the management of the organizational environment, HR departments may lack the necessary diagnostic tools and assessments of the current state of affairs. That is why one of the accompanying and not insignificant tasks of this study is the detailed theoretical development and testing of a bilingual questionnaire. This can become an effective and valuable tool for removing this restriction.

In addition, the role of organizational social capital has not been extensively studied in Englishspeaking literature concerning Hungary. The desire to fill in these gaps is at least in part responsible for the uniqueness of this research approach and its differences from previous similar studies.

### **1.3** Significance of the Study

So, this study has the unique capability of filling in a major gap in the literature on organizational social capital. Using the bleeding of social capital areas within organizations, this study will clarify the determination of primary and secondary components in the structure of organizational social capital. Furthermore, it clarifies the role of social capital in enhancing work engagement, innovativeness, creativity, and work satisfaction, as an important aspect of a constructive work environment.

It has been examined the available evidence in English published in Web of Science. The following search terms were used: ` ((TS=(organizational social capital)) OR TS=(organisational social capital)) AND TS=(Hungary)`. In light of this preliminary search, it can be argued that no quantitative studies have been conducted that examine the relationship between elements of organizational social capital in Hungary.

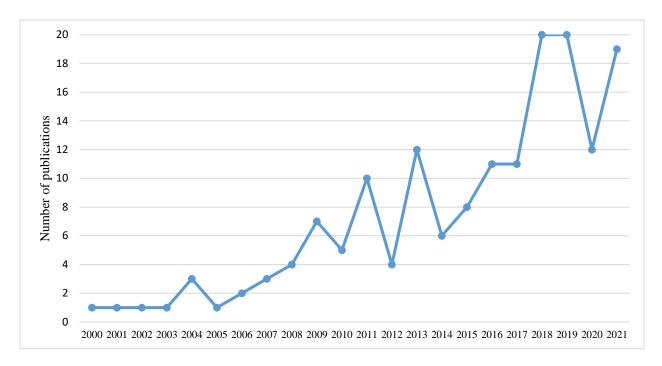
According to a search of the database for the phrase ((TS=(organizational social capital)) OR TS=(organisational social capital)), 168 articles were found. The following table presents a modest list of leading journals that have addressed this topic over the last 10 years.

| Journal title  | Number of publications |
|--|------------------------|
| ORGANIZATSIONNAYA PSIKOLOGIYA                                | 5                      |
| JOURNAL OF BUSINESS ETHICS                                   | 4                      |
| ORGANIZATIONAL PSYCHOLOGY                                    | 4                      |
| JOURNAL OF KNOWLEDGE MANAGEMENT                              | 3                      |
| KOREAN JOURNAL OF MANAGEMENT                                 | 3                      |
| THE KOREAN JOURNAL OF ADVERTISING AND PUBLIC<br>RELATIONS    | 3                      |
| ACADEMY OF MANAGEMENT REVIEW                                 | 2                      |
| ASIA PACIFIC JOURNAL OF MANAGEMENT                           | 2                      |
| EMPLOYEE RELATIONS   | 2                      |
| ESTUDIOS GERENCIALES   | 2                      |
| EUROPEAN MANAGEMENT REVIEW                                   | 2                      |
| HUMAN RELATIONS  | 2                      |
| INTERNATIONAL JOURNAL OF HUMAN RESOURCE<br>MANAGEMENT        | 2                      |
| INTERNATIONAL JOURNAL OF PUBLIC ADMINISTRATION               | 2                      |
| INTERNATIONAL PUBLIC MANAGEMENT JOURNAL                      | 2                      |
| JOURNAL OF HUMAN RESOURCE MANAGEMENT RESEARCH                | 2                      |
| JOURNAL OF MANAGEMENT STUDIES                                | 2                      |
| KOREAN JOURNAL OF LOCAL GOVERNMENT<br>ADMINISTRATION STUDIES | 2                      |
| PUBLIC MANAGEMENT REVIEW                                     | 2                      |
| PUBLIC PERFORMANCE MANAGEMENT REVIEW                         | 2                      |
| <b>REVIEW OF PUBLIC PERSONNEL ADMINISTRATION</b>             | 2                      |
| SOCIAL INDICATORS RESEARCH                                   | 2                      |
| THE KOREAN JOURNAL OF PUBLIC ADMINISTRATION                  | 2                      |

| Table 1. The most influential jour | als from the point of view of research on Organizational | l |
|------------------------------------|--|---|
| Social Capital                     |  |   |

The figure 2 illustrates the publication trend on Organizational Social Capital. Based on this graph, it can be seen that interest in this subject has increased dynamically.

Meanwhile, research on organizational social capital has mostly focused on the US, Japan, and Western Europe, whereas little research has been conducted in Central-Eastern Europe. Thus, this study contributes significantly to the English-language literature on OSC in relation to Hungary, which has been little discussed in this regard.



**Figure 2.** Publication trend on Organizational Social Capital Source: Author's own construction

Further, to develop the relevant hypotheses for the study, a brief literature review will be conducted. This is followed by the presentation of our methods, our findings, a discussion of these results, and finally our concluding comments.

## 2 LITERATURE OVERVIEW: CONCEPTUALIZING AND COMPARING ELEMENTS OF RESEARCH MODEL

This section discusses the literature supporting the initial framework proposed later in Figure 3.

### 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)<sup>1</sup>. For our purposes here, we adopt the latter view, and *we define organizational social capital as the sum of the actual and potential non-material resources embedded within, accessible through, and derived from the network of working relationships that each individual or social unit possesses.* 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

<sup>&</sup>lt;sup>1</sup> In the possible development of the topic of definitions, it is pertinent to pay attention to the CLARIDGE (2020) study. He selected 100 peer-reviewed journal articles with social capital in the title, which were published in 2019. According to its results, almost 70% of the definitions used are taken from the publications of the following authors: Robert Putnam, Pierre Bourdieu, Nan Lin, Janine Nahapiet & Sumantra Ghoshal, and to a lesser extent James Coleman. Depending on the direction of research (sociology, anthropology, political or economic sciences), scholars adapt the definition of one of these five authors. Despite the gradual and unfair leaching of primary sources from the articles of recent years, when considering the differences among the structural, cognitive and relational dimensions of social capital, the conceptual view of Nahapiet & Ghoshal (1998) remains predominant.

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).

All social activities are explained by cognitive coordination, according to cognitive science. Intentional social action requires participation by agents with collective intentions. Jointly acting individuals intentionally produce contributions to joint activities, they believe that others will produce their own, and this knowledge is mutually understood (LEUDAR, 1991). 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)

Behavioral norms determine relationships to a large extent based on the shared filing system of organizational identity. A shared understanding of the values and mission of an organization provides cognitive templates to specific types of actors (NAHAPIET & GHOSHAL, 1998; MATHIEU *et al.*, 2000; ANDREWS, 2010B).

### 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*. A review of relevant literature has been added to the presentation of the elements of the working environment that correspond to this condition.

### Trust & reciprocity (TRUST)

Associating relational social capital with trust and reciprocity between individuals within an organization has been proposed by some authors (NAHAPIET & GHOSHAL, 1998; CHOW & CHAN, 2008; CHUA, 2002). Thus, trust can be viewed as an essential component of relational social capital (NAHAPIET & GHOSHAL, 1998; CHOW & CHAN, 2008; CHUA, 2002).

### Willingness to knowledge sharing (WKS)

Based on GRANOVETTER's (1983) concept of `weak ties`, which explains the structural nature of social capital, GANGULY, TALUKDAR, & CHATTERJEE (2019) contend that weak ties can

support the efficient sharing of knowledge since they enable access to novel information by bridging other disconnected groups and individuals, which strong ties cannot do due to the possibility of redundancy of information. Relationships play an instrumental role in this regard. In particular strong relationships among actors increase the willingness to exchange information (STEINMO & RASMUSSEN, 2018).

AJZEN & FISHBEIN's (1980) theory of reasoned action, which has been applied to predict and explain a variety of social psychology behaviours, is shifted into focus. In accordance with the theory of reasoned action, behavioral intention is a measure of a person's relative strength of intention to perform a behavior and has been found to be a key predictor of actual behavior (BOCK *et al.*, 2005; TOHIDINIA & MOSAKHANI, 2010).

### Justice & fairness (FRNS)

Trust and fairness are inextricably linked and result from the social relations between management and employees, as pointed out by HASLE *et al.* (2007). They argue that justice should be considered as a related or equal element in regard to organizational social capital based on a large number of empirical studies.

### 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. Keeping in mind NAHAPIET & GHOSHAL (1998), it can be stated that structural embeddedness concerns the properties of the social system and of *the network of relations as a whole*. 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.

Perceived managerial support (MNGSP)

It is worth noting that reciprocal behavior is a fundamental foundation for workplace social relationships with managers who perceive that they have been supported, and who then demonstrate more supportive behaviors toward their own employees as a means of fulfilling their continuing obligations to the organization (CARRELL, 2018). Also, it has been clearly demonstrate that providing managerial support decreases the risk of losing the potential of work relationships (JÄMSEN, SIVUNEN, & BLOMQVIST, 2022).

### Teamwork (TW)

The structure of social capital is defined by interpersonal interactions that take place among group members (LEE *et al.*, 2019). According to GEORGE, HIRSCHHEIM & VON STETTEN (2014), the structural dimension of social capital can be described as a pattern of connections - `who you know and reach and how you reach them`. This is why the quality of connections between groups has an impact on the ease and flexibility of information sharing. According to SAMAD's (2020) study, social capital is the product of communication and teamwork.

### Colleagues support (CLGSP)

The structural component of social capital must also incorporate individuals' interactions with social networks that give them access to various resources such as advice and social support (JUTENGREN *et al.*, 2020).

### Interpersonal relations (PSR)

A structural dimension can be thought of as social and network relations whose connections determine who can be reached and how, while the factors in this dimension describe the pattern, density, and connectivity of the networks (CHOW & CHAN, 2008).

### 2.1.4 Studies related to OSC in Hungary

As previously mentioned, there is a lack of English-language literary sources on the topic under study, especially in the Hungarian context. However, it is possible to find references to the constituent elements of organizational social capital or related topics that are worth paying attention to. Therefore, this subchapter briefly collects what comes into contact with the topic and can affect the interpretation and understanding of the results.

According to some researchers Hungary, as an Eastern-Central country, has low levels of 'formal' social capital, but at the same time emphasizes informal networks that may prove more important (PICHLER & WALLACE, 2007). In Hungary, social ties such as those between relatives, friends, and acquaintances are highly valued (HEIDRICH & CHANDLER, 2015).

A comparative study of various cultures (HOUSE *et al.*, 2004; HOFSTEDE & HOFSTEDE, 2005) indicates that Hungarians tend to be more individualistic, masculine, and distant from cultural power. Based on a similar analysis of Trompenaars' national culture profile, it can be concluded that the national culture profile of Hungary possesses a medium level of universalism, individualism, specific orientation, and a low level of neutral orientation, achieved status, external orientation, and a nod to the future (TROMPENAARS, 2002).

In some cases, employees in Hungary have also noted forced knowledge sharing based on instructions, reports, and mainly data sharing, as well as knowledge sharing based on operational thinking, problem-solving thinking, and information without subjective interpretation. Knowledge management strategies often contain mechanisms for codification. With a slight focus on the future, an examination of future goals is undertaken to eliminate the gap between them and to achieve goals through the use of knowledge-sharing elements coupled with change. Furthermore, knowledge sharing is also conscious of what to share with external parties, groups, and organizations and what they should receive in return. Among the most significant barriers to knowledge sharing is the fact that the Hungarians were viewed as a bit individualistic, after which they believe that because there is no possibility or opportunity to share knowledge, they hinder its distribution (SZABÓ *et al*, 2010).

Researchers have offered some possible explanations. According to GAÁL *et al.* (2010; 2012), Hungary shows higher power distance, which results in lower availability between middle managers and their subordinates. As the power distance of a country increases, the more authority, power differences, and status privileges are accepted within that country, as well as the stronger hierarchical power practices are, and the higher the power distance within an organization, the greater the importance of self-interest is within that organization (HOUSE *et al.*, 2004). As wages in Hungary are correlated with the cost of living, money may represent a very powerful motivational factor for most employees (KOZÁK & KRAJCSÁK, 2018).

Meanwhile, based on some comparative regional studies, Hungary is considered the best location for cluster development in terms of locally available suppliers, availability of research and training services, integration of the value chain, as well as industrial-university collaboration in R&D (PITIC, SAVIC & DZUNIC, 2014). During recent interviews with key stakeholders of social enterprises in Hungary, democratic practices in decision-making have been identified as an essential characteristic of social enterprises (TAKÁCS, 2021). This may be due to the fact that Hungary has recently experienced significant changes in some social capital indicators. Based on Eurobarometer 2022, Hungary has a higher level of trust in its national Parliament and national Government than the average in the EU27 (42/36 % and 44/35 % respectively)

(EUROBAROMETER, 2022). It is noteworthy that this has occurred despite the fact that some years ago, the measurement of trust in Hungarian society indicated its low level in comparison with other European countries (DÉN-NAGY, 2013; BORISOV & VINOGRADOV, 2018).

The epidemiological emergency crisis caused an unprecedented global shock with unpredictable social and economic implications. For now, it is too early to estimate the impact of prolonged Ukrainian crisis but thanks to operational restructuring measures, Hungary showing the ability to saved sustainable growth path in the conditions of uncertainty (CPH 2021-2025, 2020). The observed potential of social capital is what makes it possible to expect that the social strength of Hungarian society will be able to withstand all of these difficulties.

### 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). Studies have consistently concluded that organizations with high levels of social capital have better workplace dynamics, including higher worker satisfaction, a more sustainable working environment, initiatives for creativity and innovation, and improved organizational performance in general (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.

In support of the construction of the research model proposed further in the next chapter, empirical evidence has shown that social capital is directly related to the ability of individuals to create original knowledge and innovation (CASANUEVA & GALLEGO, 2010; NAOWAKHOAKSORN ET AL., 2022). Also, it has been proven that OSC is an indisputable contributor to work satisfaction (ERDINGER & ERDINGER, 2018), organizational creativity (SÖZBILIR, 2018), and a predictor of work engagement (STRÖMGREN ET AL., 2016).

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### **3 OBJECTIVES TO ACHIEVE**

### 3.1 Aims and Research Questions

It is hoped that the preceding overview has demonstrated the need for further exploration, modification, and evaluation of existing categorizations of organizational social capital.

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?

Accordingly, in analyzing data on organizational social capital, this study examines (1) the relationship among measures of different types of organizational social capital, (2) their relationship to workplace outcomes, and (3) how these patterns may vary depending on the type of sector, organization size, and position of the respondent. The organizational social capital concept developed through this approach will differ at the very least in its contextual basis and in its complexity from organizational social capital developed in most previous research.

### 3.2 Scientific Research Model

An analysis of the conceptual framework model of the planned empirical study (Figure 3) 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.

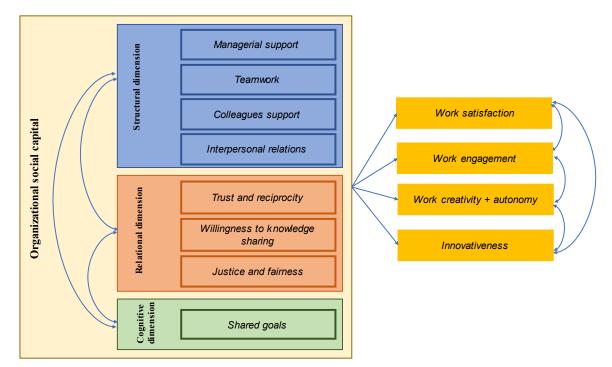
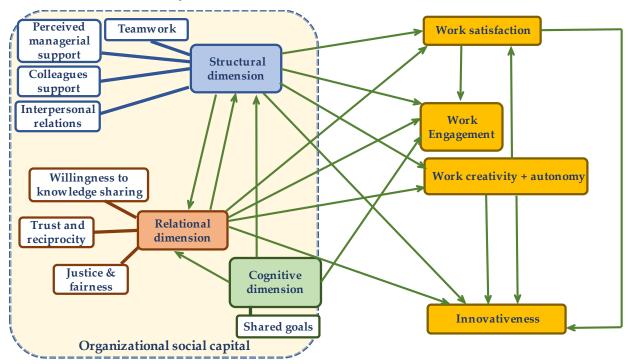


Figure 3. Conceptual framework model Source: Author's own construction

Below is described the flow of the model with specific analysis. The figure 4 explains the initial research model of this study.



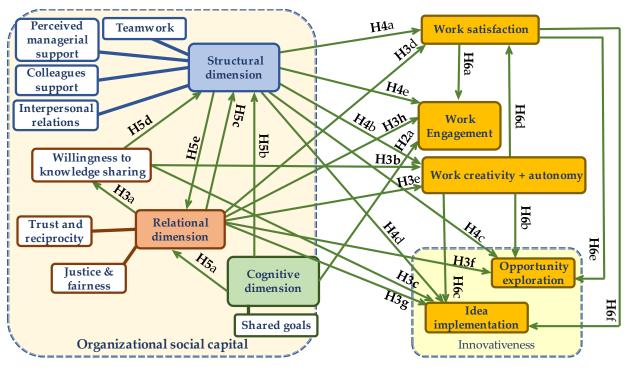
**Figure 4.** Initial Research Model Source: Author's own construction

However, as Albert Einstein stated: 'In theory, theory and practice are the same. In practice, they are not.' More detailed explanations will be provided in Materials and Methods, but for the purposes of understanding the models presented, it is necessary to make some initial remarks here. At the beginning of testing the model, as a result of exploratory factor analysis, the following two significant points were identified.

The first point is that innovativeness should not be considered as a whole dimension, but as two distinct components. Based on the logic of the combined items, these are separate dimensions 'Opportunity exploration' and 'Idea implementation'<sup>2</sup>.

Secondly, when the dimension 'Willingness to knowledge sharing' is considered autonomously, Relational OSC has demonstrated much greater internal validity.

After considering the above, the research model presented in Figure 4 has been developed to its final version (Figure 5). As outlined above, 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 5.** Finalized Research Model Source: Author's own construction

 $<sup>^2</sup>$  This conditional separation is in line with the studies conducted by AXTELL *et al.* (2000). According to his study, suggesting ideas was more strongly correlated with individual (personal and job) characteristics than with group and organizational characteristics; whereas, implementing ideas was more strongly correlated with group and organizational characteristics.

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 that are accompanied by more details and literature references.

### **3.3** Hypotheses proposed in the current study

Organizational social capital is viewed as a multidimensional construct that has distinct effects on different aspects of the workplace. As per the model, each element of work relationships is necessary for an organization to generate and reproduce organizational social capital. In the following section, each set of hypothetical statements will be discussed in greater detail. A description of each hypothesis follows the discussion.

# **3.3.1** 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.

# **3.3.2** Influence of cognitive organizational social capital on elements of work engagement (H2)

*Proposition H2: Shared goals*  $\rightarrow$  *Engagement* 

It is common for companies today to use a variety of strategies to improve employee engagement, but such initiatives do not always result in improved business performance. However, individual employees may become deeply engaged in work that does not support the organization's strategic goals or in tasks that add little value to the company. Several prior studies have examined the role of shared goals in generating engagement (e.g., CRAIG & SILVERSTONE, 2009; MACEY & SCHNEIDER, 2008). As long as the organization's goals and the personal goals are in full harmony, the level of employee state engagement is likely to be higher and a variety of adaptive behavior is likely to be demonstrated.

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

# **3.3.3** Influence of relational organizational social capital on elements of the working environment (H3)

As mentioned earlier, according to popular search engines, at the time of the study, there were not many research papers that discussed the topic of predestining dependencies between the elements of organizational social capital. This somewhat restricts the operation of second-order constructs in reasoning and conclusions. In the meantime, predestining relationships can be established based on interactions between sub-dimensions.

## *Proposition H3a: Relational OSC^3 \rightarrow Willingness to knowledge sharing*

Before the willingness to share knowledge subdimension became an independent variable in the study, it had already demonstrated its affinity with other elements of relational organizational social capital. However, trust can also be viewed as an important predictor of willingness to share knowledge (ZHAO *et al.*, 2018; OBRENOVIC *et al.*, 2020). Likewise, organizational fairness and justice can be described in the same way (ASGARI *et al.*, 2008; CUGUERÓ-ESCOFET, FICAPAL-CUSÍ & TORRENT-SELLENS, 2019).

If the group has an environment of fairness and reciprocity, each member will feel both socially and emotionally obligated to share knowledge, especially if they have already received assistance from others (AKHAVAN & MAHDI HOSSEINI, 2015).

*Proposition H3b: Willingness to knowledge sharing*  $\rightarrow$  *Work autonomy* & *creativity* 

<sup>&</sup>lt;sup>3</sup> It is important to note that, in all cases of providing justifications for the impact of relational or structural organizational social capital, each of their sub-elements is presented sequentially before each proposal.

In the relationship between initiative climate and team creativity, the intention to share knowledge acts as a mediator (LIU, KELLER, & BARTLETT, 2021).

### *Proposition H3c: Willingness to knowledge sharing* $\rightarrow$ *Idea implementation (Innovativeness)*

Researchers have suggested that innovation involves a broad process of knowledge exchange that facilitates the implementation of new ideas, processes, products, or services (AKHAVAN & MAHDI HOSSEINI, 2015).

### Proposition H3d: Relational $OSC \rightarrow Work$ satisfaction

Interpersonal trust has a positive effect on satisfaction at work (GUINOT, CHIVA & ROCA-PUIG, 2014). Numerous studies have shown significant positive relationships between work satisfaction and various forms of organizational justice (e.g., MASTERSON *et al.*, 2000; FUJISHIRO, 2005).

### *Proposition H3e: Relational OSC* $\rightarrow$ *Work autonomy & creativity*

In a study conducted by STREICHER *et al.* (2012), employees treated fairly maintained their level of creativity throughout the experiment, while those treated unfairly experienced a decline in creativity.

# Proposition H3f & Proposition H3g: Relational OSC $\rightarrow$ Opportunity exploration (Innovativeness) & H3h Relational OSC $\rightarrow$ Idea implementation (Innovativeness)

According to CLEGG *et al.* (2002), trust is associated with both the number of ideas suggested and the number of ideas implemented. A number of studies have also demonstrated that recipients' perceptions of fairness were integral to the way they made sense of innovation and the way it was implemented (FEDOR, CALDWELL & HEROLD, 2006; JIAO & ZHAO, 2014).

### *Proposition H3h: Relational OSC* $\rightarrow$ *Engagement*

According to SAKS (2006) and HAYNIE, MOSSHOLDER & HARRIS (2016), work engagement is predicted by perceptions of distributive justice.

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

# **3.3.4** Influence of structural organizational social capital on elements of the working environment (H4)

### *Proposition H4a: Structural OSC* $\rightarrow$ *Work satisfaction*

It has been shown that constructive teamwork directly contributes to work satisfaction (GINTING & SIBURIAN, 2019). In their study, BABIN & BOLES (1998) concluded that perceived

managerial support had a significant positive influence on work satisfaction. According to UM & HARRISON (1998), social support and the role of co-workers play an important role in increasing job satisfaction. The presence of positive interpersonal and social relationships at work is one of the most important factors that influence work satisfaction (GHENGHESH, 2013; STEPHANOU & GIOGALI, 2020).

### *Proposition H4b: Structural OSC* $\rightarrow$ *Work autonomy & creativity*

Results of the study indicate that supervisory and colleague creativity support has a positive impact on employees' innovation (YANG, & ZHANG, 2021). PAULUS (2000) suggests that group interaction and teamwork can be crucial to developing creative ideas. A teamwork environment influences individuals' affective experiences, cognitions, and attitudes, which in turn enhances their ability to solve problems creatively (FAY *et al.*, 2015). According to some studies, employees' creative behavior is positively influenced by the interpersonal relationships they have with their coworkers (MUÑOZ-DOYAGUE & NIETO, 2012).

### *Proposition H4c: Structural OSC* $\rightarrow$ *Opportunity exploration (Innovativeness)*

There are three types of interpersonal relationships that have been shown to enhance the innovative work behavior of employees, especially during the exploration phase: the member-supervisor relationship, the member-coworker relationship, and the member-customer relationship (HUNTER & CUSHENBERY, 2011; NGAN, 2015). Also, teamwork can enhance innovation because it is associated with structural changes to the organization that enhance the flow of ideas and knowledge and make organizations more flexible (FAY *et al.*, 2015).

### *Proposition H4d: Structural OSC* $\rightarrow$ *Idea implementation (Innovativeness)*

Cohesive teamwork and supportive leadership facilitate technical and administrative innovation (MONTES, MORENO & MORALES, 2005). It has been shown in some studies that interpersonal working relationships with high content and role multiplexity are essential to the implementation of innovations (ALBRECHT & HALL, 1991; LI, WOOD & THOMAS, 2017).

### *Proposition H4e: Structural OSC* $\rightarrow$ *Work engagement*

SAKS (2006) argues that perceived supervisor support predicts work engagement. According to the results of the study, teamwork in the management of sustainable human resources leads to a greater level of work engagement than if it is not used (NAVAJAS-ROMERO *et al.*, 2022). Statistically significant relationships were found between the quality of interpersonal relationships among colleagues and the level of work engagement and proactive work behavior (ALI, ABDALLAH & ABO EL-MAGD, 2018). Work engagement and social support from supervisors

and coworkers were significant predictors of work satisfaction (ORGAMBÍDEZ-RAMOS & DE ALMEIDA, 2017).

**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.* 

### **3.3.5** The hierarchical structure of organizational social capital elements (H5)

### *Proposition H5a: Shared goals* $\rightarrow$ *Relational OSC*

According to research, trust is closely related to common organizational goals. Work network members who share common goals are more committed to each other and have a stronger sense of trust among them (SONG *et al.*, 2019; HUANG *et al.*, 2020). Indirectly, some outcomes show common goal commitment related to distributive and informational fairness. In addition, the relationship between procedural fairness and goal commitment may also be significantly positive (GROEN, 2018).

### *Proposition H5b: Shared goals* $\rightarrow$ *Structural OSC*

According to CHOWDHURY & MURZI shared goal/value is the first attribute of successful teams (2019). In relation to all measures of organizational performance, management support and shared goals are considered single-order factors (e.g., CHEN *et al.*, 2019). In her concept of aligning goals, LAACK (2021) advocates cooperation by coordinating personal and organizational goals. A natural and strong form of support from colleagues will emerge during this process, leading to the formation of the most stable personal relationships and professional ties.

### Proposition H5c: Relational $OSC \rightarrow Structural OSC$

A high level of interpersonal trust among team members encourages open discussion, understanding of work-related problems, and effective communication within a team (POLITIS, 2003). Having a high level of trustworthiness enables an individual to be more approachable and communicate with others, thereby enhancing the quality of their interpersonal relations (WILLEM & SCARBROUGH, 2006). It has been shown that supervisors' fairness and support are associated with employees' trust (KALSHOVEN, DEN HARTOG & DE HOOGH, 2011). The development of trust is generally closely related to the support of management as well as that of colleagues (HAYTON, CARNABUCI & EISENBERGER, 2012).

Organizational justice is an antecedent to both management and colleagues support (MOORMAN, BLAKELY & NIEHOFF, 1998). Justice is one of the foundations of the resources of any relationship (CORDELLI, 2015). Actions that express interactional fairness foster high-quality interpersonal relationships (KYEI-POKU, 2014). Peer procedural justice strength influenced team

outcome variables, including performance, through teamwork processes (CROPANZANO & BENSON III, 2011).

### *Proposition H5d: Willingness to knowledge sharing* $\rightarrow$ *Structural OSC*

A positive effect of the intention to share knowledge has been observed on construction teams (ZHANG & NG, 2012). GOLDEN & RAGHURAM (2010) examine the central role of knowledge sharing in interpersonal relationships and argue that it plays a key role in the quality of these relationships. As employees' intentions to share knowledge act as a moderator in building organizational citizenship behaviors (HAN *et al.*, 2019), it may well predict organizational support, including both management and colleague support.

### *Proposition H5e: Structural OSC* $\rightarrow$ *Relational OSC*

Working together for the sake of mutual benefit and reciprocity is an integral part of teamwork (WEST, TJOSVOLD & SMITH, 2008). Trust and reciprocity are an integral part of personal relationships (EISENSTADT, AIZENSHȚADȚ & RONIGER, 1984). According to KALSHOVEN, DEN HARTOG & DE HOOGH (2011), supervisors' fairness and support are associated with employees' trust. According to SETTOON & MOSSHOLDER (2002), trust is extremely closely related to co-worker support. Supervisory support has a reciprocal effect on subordinates (CHEN *et al.*, 2008).

NIELSEN (2015) shows that organizational justice, colleagues' support, and supervisory support are connected. Positive social relationships contribute to interpersonal justice at the individual, organizational, and community levels (PRILLELTENSKY, 2012). Peer procedural justice strength influenced team outcome variables, including performance, through teamwork processes (CROPANZANO & BENSON III, 2011).

**H5** 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.

There is little literature that discusses how elements of organizational social capital interact with one another. KOSTOVA & ROTH (2003) defined social capital as the potential value that social actors form as a result of being part of social structures and the nature of their relationships within these structures. In their opinion, the formation will proceed as follows. It is through personal encounters that employees form relationships with contacts at headquarters and, over time, develop a set of perceptions and attitudes regarding the contacts and the headquarters as a whole. They are the basis for their private social capital based on their beliefs and attitudes. In spite of the fact that social capital is initially generated by individuals, the social capital created by boundary spanners

may then be diffused among the employees of subunits. As a result, the boundary spanners' private social capital will be transformed into a subunit's public good.

Taking this logic into account, it is possible to accept the primacy of cognitive organizational social capital (see also LEUDAR, 1991; LEBOW & SIMON, 1997; SACHELI, AGLIOTI & CANDIDI, 2015; FREEMAN & AUSTER, 2015) on the assumption that it can determines both its relational and structural components. Also, the abovementioned literature indicates that it is possible to assume hierarchy in both directions regarding the correlation of relational and structural dimensions. Therefore, to determine a more accurate chain of dependence, it is necessary to test both options and draw conclusions based on the mathematical results.

### **3.3.6** Mutual influence of the elements of the working environment (H6)

### *Proposition H6a: Work satisfaction* $\rightarrow$ *Work engagement*

It is reasonable to expect that employee engagement and work satisfaction will be related, according to SAKS (2006). This established literature on work satisfaction as an antecedent of work engagement suggests that satisfied workers become engrossed in their work, finding personal satisfaction in their roles and dedicating greater energy to them.

Proposition H6b & H6c: Work autonomy and creativity  $\rightarrow$  Opportunity exploration (Innovativeness) Work autonomy and creativity  $\rightarrow$  Idea implementation (Innovativeness) As innovativeness requires creativity, creativity is often regarded as an instrumental component of

innovation (AMABILE, 1997; BARON & TANG, 2011; HUGHES et al., 2018).

Research has shown that creativity is associated with innovative behavior, including opportunity exploration (SUENDARTI, WIDODO & HASBULLAH, 2020). And, also, as previously documented (AXTELL *et al.*, 2006; BAER, 2012), the production of ideas is a significant predictor of idea implementation.

### Proposition H6d: Work autonomy and creativity $\rightarrow$ Work satisfaction

Professionals' work satisfaction is influenced by their supervisor's and colleagues' perceived autonomy support (MOREAU & MAGEAU, 2012). According to the results of the study, greater autonomy at work was associated with greater work satisfaction (RUOTSALAINEN, JANTUNEN & SINERVO, 2020).

### *Proposition H6e: Work satisfaction* $\rightarrow$ *Opportunity exploration (Innovativeness)*

A majority of employees who are satisfied at work will endorse innovation rather than resist it, and they will work collaboratively to implement as well as generate creative ideas (SHIPTON *et al.*, 2006; JNANESWAR, 2019).

### *Proposition H6f: Work satisfaction* $\rightarrow$ *Idea implementation (Innovativeness)*

The implementation of ideas was shown to be associated with work satisfaction (RUOTSALAINEN, JANTUNEN & SINERVO, 2020).

**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

This chapter describes the methodology that was used in the study. The chapter is divided into three main sections following this introduction. The first one helps to understand the theoretical basis that becomes the basis for data collection to verify the proposed theoretical model. The second section explains the sampling procedure and description of the sample, while the third section identifies the preliminary results and focuses on threats to validity.

### 4.1 The operationalization of the theoretical model based on the literature review.

Despite the fact that according to some researchers there is no certain way to measure the dimensions of social capital such as cognitive capital, structural capital, and relational capital (BIRASNAV, CHAUDHARY & SCILLITOE, 2019), however, it represents an attempt to address this issue with an emphasis on organizational environment. In this section, the first suggestion is to familiarize yourself with the theoretical implications of the proposed model, which led to the development of the questionnaire (Appendix 9.2).

Developing the questionnaire began with a review of the literature for measuring dimensions that were similar to those included in the model. An important selection criterion was the quality of the statistical results achieved by the authors during the testing of their research models. In light of the results of this initial selection, a sample of studies has been compiled on the elements of the proposed model.

In order to measure constructs of *organizational social capital*, a sample survey was selected from CAPLAN (1975), ANDERSON, COFFEY & BYERLY (2002), ROONEY & GOTTLIEB (2007), ANDREWS (2010A), DEMIREL, KETKEN & KUNDAY (2012), DE CLERCQ, DIMOV & THONGPAPANL (2013), CHUANG, CHEN & CHUANG (2013), FANDIÑO *et al.* (2015) and KIM (2017). Also, a number of survey items have been adopted from DE SCHRIJVER *et al.* (2010), KIRATLI *et al.* (2016), PARFYONOVA *et al.* (2019) and CECH & ROTHWELL (2020).

A few survey items have been selected from SPECTOR (1985) and ANDERSON, COFFEY & BYERLY (2002) in order to measure *work satisfaction*.

The survey items selected from DAHIYA & RAGHUVANSHI (2021) are intended to measure *innovativeness*.

In order to measure aspects of work creativity and autonomy, survey items were selected from LIU, CHEN & YAO (2011) and WU, PARKER & DE JONG (2011).

Finally, to measure *work engagement*, a number of survey items have been selected from THOMAS (2007) and SCHAUFELI, BAKKER & SALANOVA (2006).

This resulted in a large number of questions that could not be incorporated simultaneously into the developed questionnaire. It was then decided to narrow the list of questions only to those that had adequate support from the research literature. The following subsections outline in detail the literature supporting each of the subconstructs included in the primary basis of the proposed research model. It has been provided with each statement and an explanation of how it relates to each subelement of the model.

### 4.1.1 Subconstructs of the Cognitive OSC

Establishing a shared vision among employees, establishing a strong association with the organization, and pursuing common missions and goals constitute the essence of OSC (CHUANG, CHEN & CHUANG, 2013).

### Shared goals (SHG)

Using the proposed model, cognitive organizational social capital can be viewed as a construct consisting of four statements.

1.SHG: In my organization, employees share the same ambitions and vision for the organization

2.SHG: In my organization, employees enthusiastically pursue collective goals and mission

An organization's vision, mission, and values are derived from its internal identity (DUMITRAŞCU & FELEAGĂ, 2019). Together with the information, and a clear, unitary mission, it may even be possible to substitute for hands-on management. As long as all employees (1) understand the mission and (2) realize the context and the situation (information), they can manage most of the time (HARRISON, 1987).

3.SHG: There is a commonality of purpose among employees in this organization

4.SHG: Employees in this organization are committed to the goals of the organization

According to INKPEN & TSANG, (2005) 'shared goals' refer to the degree to which network participants share and understand each other's approaches to accomplishing tasks and achieving objectives. Strong network ties which grow from shared goals help employees to place faith in each other's dedication (CHENG *et al.*, 2008).

### 4.1.2 Subconstructs of the Relational OSC

### Trust & reciprocity (TRUST)

Trust and reciprocity (TRUST) are the first key components of relational social capital at the organizational level. They serve as the foundation of all relationships, whether those relationships are personal, social, business or professional (ROSADO-SERRANO, PAUL & DIKOVA, 2018; SAZ-GIL, BRETOS & DAZ-FONCEA, 2021). This dimension is represented here by four components.

### 1.TRUST: There is mutual friendship between employees

According to NIELSEN *et al.* (2000), workplace friendship is defined as one's sense of how close one feels to other co-workers in a workplace. In work relationships characterized by trust, friendships can positively affect task performance (SIAS, 2009). Considering the importance of friendships in the workplace, especially DOTAN (2007) identified six major reasons for this phenomenon, including work safety/trust, missing roles, sanity checks, works values/life interests similarity, proximity, and instrumentality.

### 2.TRUST: Employees have confidence in one another in this organization

Employees have a strong need for confidence in the intentions of one another, and if the lack of confidence is not appropriately, addressed, the people's expectations are not met, communication breaks down, and performance declines (REINA & REINA, 2015).

### 3.TRUST: Employees in this organization show a great deal of integrity

Integrity as a 'perceived pattern of alignment between an actor's words and deeds' (SIMONS, 2002, p. 19) has been identified as one of the foundational factors of interpersonal trust among supervisors, subordinates, and fellow employees (SCHINDLER & THOMAS, 1993; WHITENER *et al.*, 1998; SIMONS, 2002; ABRAMS *et al.*, 2003).

### 4.TRUST: There is team spirit among employees in this organization

Promoting a strong sense of teamwork is key to fostering a climate of trust (ERDEM & OZEN, 2003; COSTA, FULMER & ANDERSON, 2018).

### Willingness to knowledge sharing (WKS)

The power of collective knowledge derived from social exchanges outweighs the sum of individual knowledge (NONAKA *et al.*, 1994; NONAKA, 1995). Knowledge-sharing willingness can be defined defined as the tendency an individual has to engage in knowledge-sharing behavior (BOCK *et al.*, 2005). The following four statements have been selected for the study.

1.WKS: I actively share my professional knowledge with my colleagues

When a team is cohesive, it is more likely that members will share knowledge (BAKKER *et al.*, 2006).

2.WKS: I share my ways to solve problems at the request of other group members

MCDERMOTT & O'DELL found that sharing knowledge and experience in resolving practical business issues has a strong link (2001).

3.WKS: The company often arranges events for knowledge exchange (e.g., seminar, presentation, etc.)

Events for knowledge exchange provide active professionals and peers with an opportunity to meet face-to-face and develop new relationships with stakeholders who have a professional interest in the world of work within which they operate (NARDI & WHITTAKER, 2002; JOHRI, 2008; TINDAL, 2020).

### 4.WKS: My company's management encourages information exchange

Studies have shown that management's support for knowledge sharing is positively related to employees' willingness to share knowledge (CONNELLY & KELLOWAY, 2003; LIN, 2007).

### Justice & fairness (FRNS)

To better understand this last aspect of relational OSC, the four statements listed below have been chosen for the purposes of this study.

### 1.FRNS: My organization treats its employees fairly

People are more inclined to trust authority figures, such as supervisors and managers, who are perceived to be fair. When trust is rewarded, performance improves. In contrast, employees who perceive that they have been wronged are likely to behave in a manner that harms the organization or its members (EIB & SOENEN, 2017).

### 2.FRNS: My organization rewards or punishes employees according to their performance

A sense of fairness in working relationships is highly dependent upon the proportion of employees' contributions and rewards (AZUBUIKE & MADUABUCHI, 2021).

### 3.FRNS: Employees in my organization are rewarded fairly

One of the manager's responsibilities is to ensure that employees are effectively rewarded and compensated for their contributions, achievements, and difficulties that they encounter while performing their job duties (ARMSTRONG & MURLIS, 2007; MANAF *et al.*, 2022).

4.FRNS: Employees can count on being treated with courtesy and respect in my organization

A perception of interactional justice is formed in the minds of employees in organizations and is viewed as a form of interpersonal respect (WU *et al.*, 2012).

#### 4.1.3 Subconstructs of the Structural OSC

#### Perceived managerial support (MNGSP)

Social support literature has identified four types of support: emotional, instrumental, informational, and esteem/appraisal support (WEISS, 1974; CASSEL, 1976). The act of offering emotional support involves expressing empathy and caring for the person receiving the support. Support for self-esteem typically consists of providing feedback that is relevant to self-evaluation. The provision of tangible goods and services is instrumental support; whereas the provision of information and advice is informational support. The majority of measures of supervisor support consist of items that assess these four aspects, however, each of these is measured with only one or two generic items, which do not capture the many overt and more subtle forms of supervisory support.

An employee's perception of supervisory support describes how supervisors provide resources and feedback when it comes to understanding and implementing corporate sustainability policies and procedures in the course of their daily work (CANTOR *et al.*, 2012). Managers can play an important role in alleviating the distress experienced by frontline employees and preventing negative outcomes (YUE, WANG & GROWTH, 2017). Subordinates tend to attribute the supportiveness of such treatment, in part, to the organization rather than only to the supervisor's personal inclinations, since supervisors act as agents of the organization when directing and evaluating their employees.

In this regard, Amabile has found seven kinds of leadership behaviors that have a significant effect on employees' views on support as expressed through their work diaries. It includes (1) Supporting-Positive, (2) Monitoring-Positive, (3) Recognizing-Positive, (4) Consulting-Positive, (5) Clarifying Roles and Objectives, (6) Monitoring-Negative, and (7) Problem Solving-Negative. To summarize and generalize, it may be noted that the support for the team leader includes taskoriented and relationship-oriented aspects (AMABILE *et al.*, 2004). The following four statements are presented in order to clarify this component of structural organizational social capital.

# 1.MNGSP: My supervisor provides me with clear expectations of my work responsibilities.

Setting clear expectations for subordinates is an integral part of a manager's job (TIFFAN, 2011). By sharing expectations with team members and allowing them to ask questions, clarify, and sometimes re-negotiate, both the manager and the team members are better prepared to perform their responsibilities (ROBINSON-WALKER, 2014).

# 2.MNGSP: My supervisor is supportive when I have a work problem.

The manager who cares about their employees' well-being is likely to be proactive in identifying problems, assisting in their solving, and reframe these problems as opportunities (LUSSIER *et al.*, 2021).

# 3.MNGSP: My supervisor treats my mistakes as a problem to be solved rather than a focus for criticism.

'Supportive managerial environments allowed people to try and to fail without fear of the consequences' (KAHN, 1990, p. 711). This is why supportive managerial interventions should concentrate on enhancing worker confidence, reframing problems, overcoming frustration, and optimism (LUSSIER *et al.*, 2021).

# 4.MNGSP: My supervisor explains the reasoning behind decisions that affect me.

Rather than being treated as robots, employees are treated as human beings. In the absence of trust between organizational levels, explanations and constructive communication may be avoided. Subordinates feel heard, rather than ignored, even if they cannot influence the decision. This promotes a positive work environment. Consequently, a person deeply familiar with what they are doing and what the end result is supposed to be can provide valuable insight into improving processes (GALFORD & DRAPEAU, 2003; NIKOLAOU, VAKOLA & BOURANTAS, 2011).

#### 5.MNGSP: My supervisor communicates with me in an open and direct manner.

Relationship transparency is a key characteristic of authentic leadership and is positively associated with organizational psychological capital (WIRAWAN, JUFRI & SAMAN, 2020). Such relational transparency is characterized by the fact that relations with employees are based on sincerity and honesty (TAŞTAN & DAVOUDI, 2019). Otherwise, if the leader's character is perceived as untrustworthy or dishonest, that creates concerns and feelings of vulnerability among employees (DIRKS & FERRIN, 2002).

#### Teamwork (TW)

In order to elucidate this component of organizational social capital, the following three statements are presented.

#### 1.TW: My company encourages employee teamwork.

There is no doubt that recognition for teamwork and encouragement from the company has an important role to play in encouraging employees to participate in teamwork (ADEBANJO & KEHOE, 2001).

#### 2.TW: Teamwork is part of the problem-solving process at my company.

It is evident that effective teamwork and a problem-solving process go together inseparably (GOLTZ *et al.*, 2008).

# 3.TW: I feel I am really a part of the group of people I work with.

The sense of belonging to a group is one of the major attributes of the effective application of teamwork (SEDGWICK & YONGE, 2008).

# Colleagues support (CLGSP)

This dimension has been studied by selecting four statements. As noted by some researchers, in some cases, social support instruments have been adopted that were originally developed and validated outside of the workplace, such as support within close, personal relationships (e.g. DIGNAM & WEST, 1988). In order to illustrate this component of structural organizational social capital, the following four statements are provided.

# 1.CLGSP: In our team, we openly share our thoughts without fear of rejection.

As a rule, the most successful teams are characterized by an open, direct communication style (BENINGHOF & SINGER, 1992). Shellenbarger found that employees considered open communication to be the most meaningful measure of a positive work environment (SHELDENBARGER, 1993). In fact, if an environment permits diverse members to contribute their different perspectives and opinions in an atmosphere of non-judgment, it will enhance team communication quality and performance in diverse teams (VALLS, GONZÁLEZ-ROMÁ & TOMÁS, 2016).

# 2.CLGSP: I can rely upon my coworkers especially when things get tough at work.

A colleague's willingness to be relied upon is related to their trustworthiness and can be influenced by feelings and beliefs arising from social perceptions of the other person and from workplace relationships. Having reliable teammates on a team project means that other members do not have to expend as much effort to ensure success (GIBBONS & ZOLIN, 2009).

3.CLGSP: My work team is one of the most meaningful social groups to which I belong.

According to the Self-Determination theory, one of the key needs is relatedness, or the desire to feel connected to others, caring for others, and being cared for by others (SCHOOFS, HORNUNG & GLASER, 2022).

#### 4.CLGSP: Frequently, my colleagues offered me assistance when the situation called for it.

Within the workplace, active social support may take the form of emotional support (someone who offers sympathy or listens to their problems or grievances and provides comfort) informational support (someone who provides advice and information) or instrumental support (someone who provides direct assistance to accomplish the objective) (SIAS, 2009).

#### Interpersonal relations (PSR)

Based on the notion that social capital functions through relationships (REIMER *et al.*, 2008), the need for relatedness implies a desire to form caring bonds and develop positive alliances with others (BAUMEISTER & LEARY, 1995; DECI & RYAN, 2000). The following three statements were used to measure this element in this particular case.

1.PSR: The company provides training to improve the interpersonal skills of employees to build good relationships.

Developing interpersonal relationships is promoted through training and development (KAŠE, PAAUWE & ZUPANROBERT, 2009). For this reason, firms should provide employees with training in order to improve their relationship-building skills (COLLINS & SMITH, 2006; JACKSON *et al.*, 2006; LOPEZ-CABRALES, PÉREZ-LUÑO & CABRERA, 2009).

2.PSR: Personal relationships in our company encourage a trustful working environment.

Trust is built on communication. A higher level of trust will be established when a number of professional intercommunication skills are acquired, resulting in positive outcomes (MORGAN & HUNT, 1994; CHENG *et al.*, 2008).

# 3.PSR: I look forward to being with the people I work with each day.

In the modern world, the nature of social capital is undergoing transformation. Social relations in terms of work-life balance may become more meaningful to some individuals due to their individual preferences (IDOWU, VERTIGANS & SCHIOPOIU, 2017; PUTNAM, 2020).

# 4.1.4 Subconstructs of the constructive elements of the work environment

#### Work engagement (ENGM)

The following five statements were selected for the study in order to better understand this aspect.

# 1.ENGM: Trying to constantly improve my job performance is very important to me

Employees are more likely to perform well and remain engaged when they can proactively adjust their work environments (BAKKER, TIMS & DERKS, 2012).

#### 2.ENGM: I find the work that I do full of meaning and purpose

KHAN *et al.* (2021) found that meaning was related to work engagement. This is because meaningfulness ensures that employees are provided with a sense of purpose, significance, and importance within their job (LEE, IDRIS & DELFABBRO, 2017).

#### 3.ENGM: Time flies when I am working

Employees who are immersed in their work feel that time flies and very often experience happiness when they are working intensely under such conditions (DELIGERO & LAGUADOR, 2014).

# 4.ENGM: My job inspires me

The state of engagement is filled with enthusiasm, energy, and inspiration (SCHAUFELI, BAKKER & SALANOVA, 2006) and is often construed as an expression of an individual's relationship with his or her work

# 5.ENGM: When I get up in the morning, I feel like going to work

As an aspect of engagement, the vigor that is experienced before starting work in the morning may represent the vigor that was experienced the previous day (BREEVAART *et al.*, 2012).

#### Work satisfaction (STSF)

The following five statements have been selected for analysis in order to illustrate the significance of this factor.

#### 1.STSF: The work I do on my job is meaningful to me

Since people generally feel powerless in the world, they search for ways to feel important and special (KAHN, 1990). Possibly because of this, researchers have found a strong positive relationship between meaningfulness of work and employee work satisfaction (ROSSO, DEKAS & WRZESNIEWSKI, 2010; GHISLIERI *et al.*, 2019).

#### 2.STSF: I feel I am being paid a fair amount for the work I do

According to CURTIS & GLACKEN (2014) work satisfaction index identify pay as one of the three most important variables.

3.STSF: When I do a good job, I receive the recognition for it that I should receive

Work satisfaction has been defined by ARNETT, LAVERIE & MCLANE (2002) as an individual's appraisal of their job, influenced by the role they play in his/her organization, management systems, work environment, and so forth, and the higher the appraisal, the greater the job satisfaction. Additionally, ŽIVČICOVÁ, MASÁROVÁ & GULLEROVÁ (2022) established a significant relationship between work satisfaction and recognition.

# 4.STSF: I like doing the things I do at work

In their study, KUO & CHEN (2004) suggested that work satisfaction is the measure of how much one enjoys one's job within the work process. The term can also refer to feelings and beliefs that a person has about his job (GEORGE & JONES, 1999).

# 5.STSF: I feel a sense of pride in doing my job

A feeling of pride was found to be closely associated with work satisfaction (RIBEIRO, ANTAO & FERNANDEZ, 2021).

# Work autonomy and creativity (CRTV)

The concept of creativity refers to the creation of innovative products, services, and work methods (AMABILE, 1988). The following five statements have been selected for the study.

#### 1.CRTV: I really enjoy a task that involves coming up with new solutions to problems

Work-related problems, inconsistencies, and discontinuities are often catalysts for the generation of creative ideas among employees (DRUCKER, 1985; KANTER, 1988). For one to be considered truly creative at work, novelty is not sufficient; usefulness must also be found in ideas and solutions (JOO, MCLEAN, & YANG, 2013).

#### 2.CRTV: The job provides me with significant autonomy in making decisions

According to Self-Determination Theory (DECI & RYAN, 2000; GAGNÉ & DECI, 2005), employees are more likely to create novel ideas when their motivation is autonomous in nature, that is, when they engage voluntarily in their work because they find it enjoyable, interesting, valuable, or both.

#### 3.CRTV: The job allows me to make decisions about what methods I use to complete my work

In terms of creativity, autonomy refers to the extent to which an individual retains control over how to accomplish a task. A high degree of autonomy means that the individual has the freedom to choose the method and procedure for getting the task completed (ZHOU, 1998).

#### 4.CRTV: I often generate creative ideas

In the real world, innovativeness describes concepts that are unique or rare and that only a very small number of people will come up with (RUNCO & CHARLES, 1993; DIEDRICH *et al.*, 2015).

# 5.CRTV: If I believe in an idea, no obstacle will prevent me from making it happen

A new idea does not add value to the organization unless it is implemented and has the potential to contribute to its growth and effectiveness. For this reason, the motivation to implement new ideas should not be overlooked (LEVITT, 1969, 2002).

# Innovativeness (INNV)<sup>4</sup>

However, creativity does not always imply innovation. Instead, 'Innovation is the successful implementation of creative ideas by an organization' (AMABILE & FISHER, 2000, p. 482). Harvard Business Review editor Theodore Levitt once stated, 'Ideas are useless unless used' (LEVITT, 1963: 79). Thus, the proof of a great idea's value is in its implementation. The following fourteen statements have been chosen to track the dynamics of this process in working relationships.

1.INNV: Often, I look for ways to improve a process, technology, product, service, or work relationship

Innovation is often viewed as an improvement process that applies to specific areas, such as technology, product, service, and work relationship (VOLKOVA, 2022).

2.INNV: I often recognize opportunities to make a positive difference in work, department, organization, or with customers

To advance radical ideas, firms must first identify opportunities (LEIFER, O'CONNOR & RICE, 2001).

3.INNV: It is common for me to pay attention to non-routine issues in work, department, organization, or marketplace

Unlike routine processes, non-routine processes are open systems that may be interpreted and given meaning in a flexible manner (LILLRANK, 2003). Generally, it involves a discontinuous and disruptive change in the processes, activities, business models, products, and services of an organization. Thus, such processes have the potential for producing revolutionary rather than evolutionary innovations and solutions (RITALA, 2013).

<sup>&</sup>lt;sup>4</sup> Later, based on the results of factor analysis, the dimension was broken into two components: idea implementation and opportunity exploration.

#### 4.INNV: It is not unusual for me to define problems more broadly to gain greater insight into them

A cognitive psychologist believes the link between a problem and a number of possible solutions is a cognitive one that takes place in the brain of an individual (ANGLE, 1989). Hence, the multidimensionality of the team members when considering complex and non-standard problems is of paramount importance. Multidimensional individuals tend to avoid narrow thinking when the team should be thinking more broadly (O'CONNOR & MCDERMOTT, 2004).

#### 5.INNV: It's quite often that I'm seeking out new working methods, techniques, or instruments

Innovativeness begins when employees make suggestions about improving organizational products, policies, or procedures (OLDHAM & DA SILVA, 2015).

#### 6.INNV: Experimenting with new work ideas and solutions is often on my agenda

In order to achieve organizational innovation, experimentation behaviors are essential (LEE et al., 2004).

#### 7.INNV: Quite often, I evaluate the strengths and weaknesses of new work ideas

Innovative audits are useful for identifying and prioritizing valuable innovation problems. By passing through the process of evaluating the strengths and weaknesses of new work ideas, a firm's major innovation capabilities can be significantly enhanced (BJÖRKDAHL & HOLMÉN, 2016; FRISHAMMAR *et al.*, 2019).

#### 8.INNV: I am quite often attempting to convince people to support an innovative idea

Several researchers have examined the process of implementing innovative ideas using the terms 'issue selling' and 'buy-in relationships', which address the efforts of novelty agents in bringing certain issues to the attention of top management (DUTTON & ASHFORD, 1993; BAER, 2012).

#### 9.INNV: Quite often, I push ideas forward so that they can be implemented

Innovation is likely to encounter conflict with and opposition from other actors who wish to prevent change. It is likely that a worker who champions innovative ideas for change will challenge elements of the established framework of work goals, work methods, task relationships, informal norms, and expectations held by the actors in the workplace (XIE & WANG, 2020).

#### 10.INNV: Quite often, I take risks in order to support new ideas

It can be challenging and difficult to manage the complex and potentially risky process of innovation (CAMPS & MARQUES, 2014). Highly creative ideas are likely to be met with more skepticism and hesitation because they are likely to produce uncertainty (JANSSEN, VAN DE

VLIERT & WEST, 2004; BAER, 2012). In other words, performing innovative activities can sometimes be risky for individuals and can result in unintended costs.

11.INNV: Frequently, I put effort into developing new things

12.INNV: I often contribute to the implementation of novel ideas

Today, employees are expected to actively contribute to the success of their organizations by developing and implementing new ideas (SULISTIAWAN *et al.*, 2017).

13.INNV: Changes that seem beneficial are easily accepted by me

It is not always easy for humans to accept innovative changes due to their tendency to avoid insecurity and stress associated with change, their habits and preference for familiar practices and actions, and their commitment to an established framework of theories and practices (JANSSEN, VAN DE VLIERT & WEST, 2004).

# 14.INNV: Often, I incorporate new ideas for improving an existing process, technology, product or service

In order to be successful, the supported innovative idea must be implemented and put into practice. This frequently involves making innovations to regulate part of the work processes and may involve activities such as developing new products and processes, evaluating them, and modifying them (VAN DE VEN, 1986; KANTER, 1988; KLEYSEN & STREET, 2001).

# 4.2 Sampling Procedure and Description of the Sample

# Measures & Instrument development

Following the previously described assembling of the most relevant statements, all the scale items have been translated into Hungarian with the assistance of Hungarian colleagues, following the back translation method developed by BRISLIN (1970). 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).

Prior to converting the identified opinions into the final version of the survey, there was an attempt to reduce the number of items by eliminating or combining similar items. For example, from `I am constantly searching for new working methods, techniques, and instruments` and `It's quite often that I'm seeking out new working methods, techniques, or instruments` only one was left `It's quite often that I'm seeking out new working methods, techniques, or instruments`.

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. The final questionnaire consisted of 62 statements defining elements of the working environment and 8 sociodemographic clarifications (Appendix 9.2).

#### Data collection

The format for data collection has been determined by several aspects of the research model. Obviously, it is difficult to talk about group processes in a small enterprise of two people or to discuss the current level of managerial support with a non-working person. This is why only employees, managers, and owners of companies with at least five employees operating in Hungary, regardless of ownership (domestic or foreign) were targeted for collecting data. Respondents comprised a random sample of full-time workers employed by organizations or entrepreneurs. The algorithm of the electronic questionnaire was specially configured with screening questions to cut off respondents for compliance with these initial criteria. 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) from further analysis. This resulted in only 405 responses, allowing them to be analysed.

#### Description of the Sample

Table 2 summarizes the characteristics of the organizations from which the data was collected. 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. In the table, it can be seen that 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.

The questionnaire also included the ability to specify the region where the company is located. However, given that 86.68% of the results were in Buda or Pest and that some other regions were represented by less than 1%, consideration of this parameter is irrelevant.

| Variable                      | Category                        | Frequency | Percentage |
|-------------------------------|---------------------------------|-----------|------------|
|                               | Public sector                   | 135       | 33.3       |
| Business sector               | Private sector                  | 208       | 51.4       |
|                               | Non-for-profit sector or an NGO | 62        | 15.3       |
|                               | Production                      | 92        | 22.7       |
| Activity sector (industry)    | Construction                    | 12        | 3.0        |
|                               | Services                        | 301       | 74.3       |
|                               | 5 to 9 employees                | 24        | 4.9        |
| Size in number of employees   | 10 to 49 employees              | 37        | 9.1        |
| Size in number of employees . | 50 to 249 employees             | 116       | 28.6       |
| -                             | 250 employees or more           | 228       | 56.3       |
|                               | 1-2 years                       | 8         | 2.0        |
|                               | 3-5 years                       | 8         | 2.0        |
| Age                           | 6-10 years                      | 9         | 2.2        |
| -                             | more than 10 years              | 380       | 93.8       |

Table 2. The main demographic characteristics of companies

#### Source: Author's own construction

Table 3 illustrates the sociodemographic composition of the participants. In this study, the majority of participants hold subordinate positions (73.1%), and the majority of participants are female (69.9%). The majority of participants have also graduated from universities (95.1%) with at least a bachelor's degree. Nevertheless, such a significant imbalance should not have an adverse effect on this research. In this study, a significant number of elements of the organizational environment considered are more typical of organizations where higher-educated white-collar workers are the majority (JOO & LIM, 2009; HUANG, 2011).

In terms of age segment, 39.0 % of the samples were between 22-35 years of age and 39.8 % were between 43-57 years of age.

| Variable | Category    | Frequency | Percentage |
|----------|-------------|-----------|------------|
| Gender   | Female      | 283       | 69.9       |
|          | Male        | 122       | 30.1       |
| Age      | 22-35 years | 158       | 39.0       |

|                     | 36-42 years          | 66  | 16.3 |
|---------------------|----------------------|-----|------|
|                     | 43-57 years          | 161 | 39.8 |
|                     | 58-65 years          | 20  | 4.9  |
| Education level     | Secondary education  | 20  | 4.9  |
|                     | Higher education     | 385 | 95.1 |
| Position in company | Manager or boss      | 109 | 26.9 |
|                     | Subordinate employee | 296 | 73.1 |

Source: Author's own construction

#### 4.3 Data Analysis

The constructs identified based on the literature review in the conceptual model have been developed and tested through a series of firstly exploratory (EFA) using Varimax rotation and then confirmatory studies (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 criterion.

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  $\chi^2/df \le 5$  (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. 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

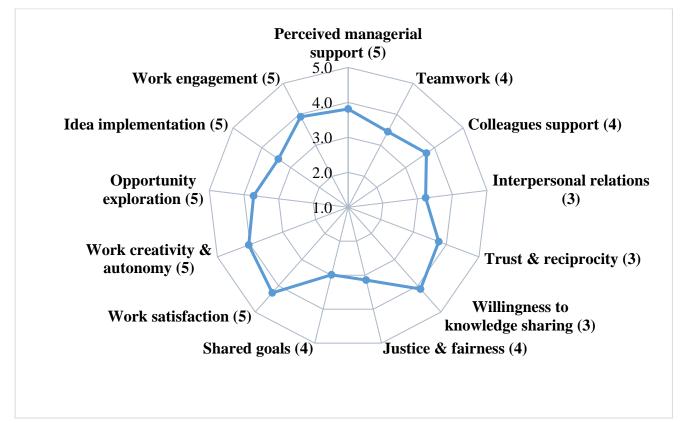
So then, as part of the research, an attempt has been made to understand the causes and consequences of organizational social capital in the organization setting. This section describes the study and the methodology used, provides an analysis of the statistics presented in Chapter 4, and summarizes the findings and their relationship to the original hypothesis.

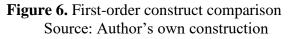
# 5.1 Validity and Reliability of Measurement (Outer) Model

During the initial analysis, it was discovered that the conceptual model referred to earlier could not be fully estimated. Based on the results of EFA with Varimax rotation the Innovativeness dimension has been divided into two separate dimensions 'Opportunity exploration' and 'Idea implementation' (Appendix 9.3, Table 8). In addition, when the dimension 'Willingness to knowledge sharing' is considered independently, Relational OSC has much greater internal validity (Appendix 9.5, Table 10).

Descriptive statistics of items and examined dimensions

In the final version, each of the 13 constructs of the first order was formed from 3 to 5 items (Figure 6). The lowest value of Mean was 2.99 in the case of 'Shared goals' and the highest was 4.27 in the case of 'Work satisfaction' which is regarded as satisfactory.





The lowest value of composite reliability (CR) was 0.874 in the case of 'Interpersonal relations' and the highest was 0.967 in the case of 'Perceived managerial support' (Appendix 9.3, Table 8) which is regarded as satisfactory. The convergent validity score is higher than 0.50 in all the cases. Thus, the requirement for convergent validity is also met (HAIR *et al.*, 2017).

All the first-order constructs (Perceived Managerial support, Teamwork, Colleagues support, Interpersonal relations) loaded at 0.6 for organizational social capital's structural dimension, indicating its adequate reliability as a second-order construct (Appendix 9.5, Table 10). According to the theoretical model, willingness to share knowledge belongs to the Relational OSC, however, because of its low loading (0.571), only two first-order constructs (Trust & reciprocity, and Fairness & justice) remained. Examining the average values of the three elements of organizational social capital (structural, relational, cognitive) according to the model, as well as the willingness to share knowledge, it can be established that the lowest average value (2.99) belongs to the shared goals dimension. The willingness to knowledge sharing represents the highest average value (4.12) among the elements of organizational social capital. The structural and relational elements have average values of 3.53 and 3.62.

#### 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 9.3, Table 8). 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)

According to Hypothesis H1 the organizational social capital strength, innovativeness, creativity, engagement, and work satisfaction differ depending on the sector, company size, and position of the respondent.

The hypothesis was tested with the Mann-Whitney test, Kruskal-Wallis test, and Dunn-Bonferroni post-hoc test. The results for each of the three groups considered are presented along with comments in the case of significant effects. At the beginning of the analysis of each group, a radial

diagram is given in order to clarify and generalize the findings. The results that are significant are highlighted in bold on each diagram.

# (1) Significant differences depending on the position of the respondent

Depending on the position of the respondents, significant differences were observed in their assessments of aspects of the working environment (see Figure 7).

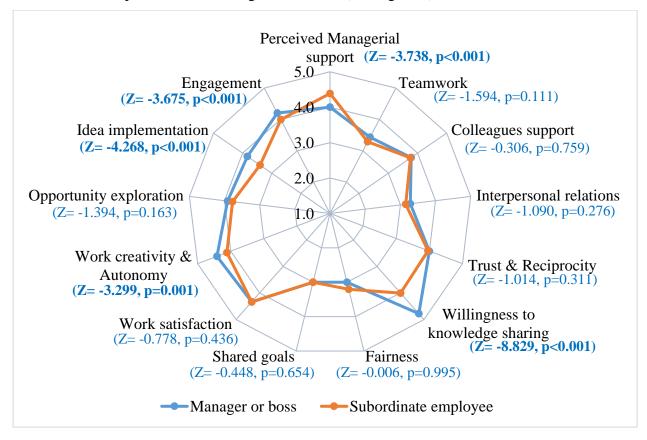


Figure 7. Comparing the positions of respondents based on the mean values of the examined dimensions Source: Author's own construction

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.

The support provided by management to managers is generally less than that provided to subordinates (Z= -3.738, p <0.001). The fact that managers are in charge of support rarely implies that managers themselves are in need of support and guidance as well. It is essential, however, that management provides support to subordinate managers to ensure that the roles and abilities of every manager to lead in an organization are balanced. By engaging in such a discussion, a manager is able to communicate about the pressures arising from their work. This allows them to discuss difficult events and gain a deeper understanding of their lonely work environment. A

manager who successfully utilizes management supervision and support from higher colleagues will feel better and be able to act more effectively, regardless of conflict or pressure. Managers who do not possess or cannot exploit guidance will become fatigued more easily, which will lead them to seek out support and opportunities to alleviate the loneliness of management (OLLILA, 2008).

Managers are generally more likely to share their knowledge than subordinates (Z=-8.829, p<0.001). It has been demonstrated by CONNELLY & KELLOWAY (2003) that employees' perceived management support for knowledge sharing significantly affects their willingness to share knowledge. This may be due to the fact that transformational leadership emphasizes the sharing of knowledge. The manager is, therefore, the most informed and concerned party in this process. An example of personal behaviour is one of the most effective methods for promoting behavioural change.

Work creativity and autonomy are higher among managers and bosses than among subordinate employees (Z= -3.299, p=0.001). Due to their level of knowledge diversity, management and administrative teams are more likely to demonstrate creativity and diversity in task-related knowledge and expertise (FAY *et al.*, 2015).

The indicator of idea implementation is higher among managers and bosses than among subordinate employees (Z= -4.268, p<0.001). Consequently, the findings support the contention that managers have a greater interest in innovation and influence its adoption by creating a favorable climate for innovation. A positive attitude of leaders toward innovation facilitates the implementation of innovation by instilling a sense of confidence in the members of the organization. This provides support for their proposals for novel practices. It also facilitates adoption decision because strategic decision-makers with a more favorable attitude toward innovation may decide to adopt innovative ideas that depart from existing practices, rather than those that are more consistent with current practices, as well as allocate resources to acquire and implement them (DAMANPOUR & SCHNEIDER, 2006).

The engagement level of managerial employees and superiors is higher than that of subordinate employees (Z=-3.675, p<0.001). A study by KHANDAL, VANDANA & SINGH (2019) supports the findings of this study. Their analysis also showed that employee engagement and commitment are higher among employees in higher positions compared to employees in lower positions.

#### (2) Significant differences among sectors

According to the Kruskal-Wallis test and Dunn-Bonferroni post hoc test results (Figure 8), *there is a significant difference among sectors in each of the thirteen dimensions evaluated.* 

Public sector managers are perceived as less supportive than private sector or non-profit managers (H=24.446, p<0.001). In MOORE (2000), the idea is supported by the argument that non-profit organizations produce value that can be attributed primarily to the achievement of social purposes. Since these types of organizations operate in a different cultural context, nonprofit managers are also focused on delivering value to the public, along with providing general interorganizational support.

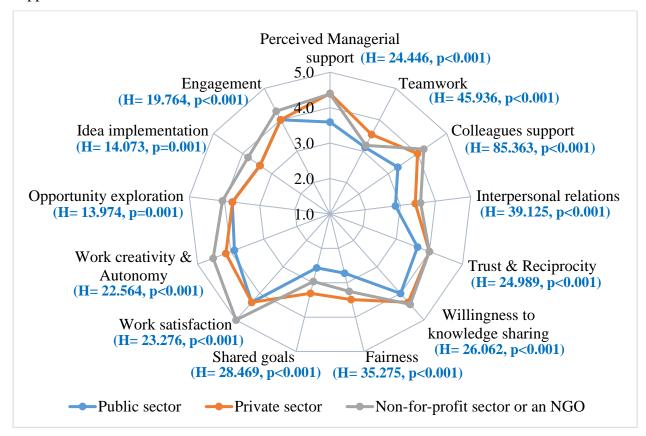


Figure 8. Comparing the sectors based on the mean values of the examined dimensions Source: Author's own construction

Among the sectors for teamwork, the private sector emerged as the leader, followed by the nonprofit sector and, ultimately, the public sector (H=45.936, p<0.001). Similar results were obtained by BENEVENE, CORTINI & CALLEA (2011). The two groups of participants from Non-profit and Public sector organizations showed differences both in terms of leadership style regarding teamwork as well as teamwork output. Non-profit employees emerged as the group where teamwork is more effective.

An explanation of the differences between the private and non-profit sectors is provided by JACA *et al.* (2013). Even though the non-profit sector and the public sector are not the same, generally, people in non-profit organizations (like healthcare) are hired as the result of a public examination process, which disregards certain aspects related to teamwork. Because of this, teams in the sector

are made up of whoever is available, and it is not always possible to find the most suitable candidate based on the teamwork criteria.

In addition, teamwork quality has a greater impact on organizational process success in the public sector as compared to projects in the private sector, indicating that teamwork quality plays a greater role in the public sector than in the private sector. The public sector, however, has fewer restrictions than private projects, and it is difficult to deal with them in a flexible manner (OH, LEE & ZO, 2019).

The level of support among colleagues in the private and not-for-profit sectors is higher than that in the public sector (H=85.363, p<0.001). As we mentioned earlier, member attachment to teamwork and satisfaction for work-team commonality is higher in the non-profit sector, individual performance is less effective in the absence of support and cooperation from others with the same responsibilities. Once again, these results can be attributed to the importance of keeping up the motivation of their members by the non-profit sector, which has been identified as an ongoing challenge facing non-commercial organizations. Based on the literature review, nonmaterial motivation is crucial for organizations to retain their employees after paying lower wages (BENZ, 2005; BENEVENE, CORTINI & CALLEA, 2011). The emphasis on encouraging such support is yielding positive results, as can be seen here.

In the private and non-profit sectors, interpersonal relations are quite comparable and higher than in the public sector (H=39.125, p<0.001). It is supported by BENEVENE, CORTINI & CALLEA (2011), who conclude that NPOs demonstrate a higher level of management of inter-team relationships than the public sector. The results of this study can be interpreted in light of the NPOs' strong tendency to learn from their interorganizational environment in order to better understand changing requests and needs.

In the private and not-for-profit sectors, colleagues are more likely to demonstrate trust and reciprocity than in public sector (H=24.989, p<0.001).

The private and not-for-profit sectors demonstrate a greater willingness to share knowledge than the public sector (H=26.062, p<0.001). In a similar study conducted in the public sector (SANDHU, JAIN & BTE AHMAD, 2011), this finding was confirmed. According to their research, despite the positive attitudes of public sector employees regarding willingness to share knowledge, they believed that knowledge sharing was not clearly communicated to them, and many did not know whether a knowledge-sharing strategy existed within their organization. Employees in the public sector also exhibited self-serving biases when it came to their willingness to share knowledge compared with their perception of their colleagues' willingness to do so. In addition, respondents perceived organizational barriers as being more critical than individual barriers. A significantly higher degree of fairness in working relationships is found in the private and notfor-profit sectors than in the public sector (H=35.275, p<0.001). As for fairness in the public sector in comparison to the private and not-for-profit sectors, the results can generally be lower and particularly dissatisfactory in areas such as the balance of incentives to contribute, transparency of promotions, and opportunities for professional development and career advancement (TORTIA, 2006).

It is more common for colleagues in the private and not-for-profit sectors to share goals than they are in the public sector (H=28.469, p<0.001). The assertion that public sector organizations are characterized by greater goal ambiguity and complexity has been empirically confirmed (RAINEY, 2003).

Both the public and private sectors have comparatively lower levels of work satisfaction than the non-profit sector (H=23.276, p<0.001). The finding of MIRVIS & HACKETT (1983) was similar to the finding that non-profit employees get satisfaction from their work, which may compensate for the lower wages and benefits they receive. There is no reason to believe that for-profit and public sector employees are unsatisfied with their work-only that they are less satisfied than employees in other sectors. And the same results were obtained by BENEVENE, CORTINI & CALLEA (2011), which can be explained by the significant effort NPOs put into maintaining the motivation of their members, which is one of their greatest challenges since it is crucial to compensate for lower wages of their employees in order to retain them.

The public and private sectors both score lower than the non-profit sector in terms of work creativity and autonomy (H=22.564, p=0.001).

The private and not-for-profit sectors demonstrate a greater level of opportunity exploration than the public sector (H=13.974, p=0.001). According to a popular view, public agencies are characterized by more formal rules and higher levels of red tape than private organizations (RAINEY & BOZEMAN, 2000). In reality, further research has shown that the level of bureaucracy is comparable in some activities, especially in the process of starting a new project in both sectors (ORAZI, TURRINI, & VALOTTI, 2013).

Similar to in case of opportunity exploration private and not-for-profit sectors demonstrate a greater level of idea implementation than the public sector (Z= -4.268, p<0.001). This case clearly indicates that the division of innovativeness into two subcategories has remained conditional.

In comparison with the public and private, the not-for-profit sector exhibits a lower level of work engagement (H=19.764, p=0.001). Research studies (SHARMA & GANGWANI, 2017) have also concluded that employee engagement was higher in non-profit organizations than in profit organizations. It is their opinion that this is due to the fact that compensation and benefits, work-

life balance, supervisor support, and job fit are better in the public sector and enhancement and learning, motivation, and enabling work conditions are stronger in the private sector.

#### (3) Significant differences depending on the organization size

According to Kruskal-Wallis and Dunn-Bonferroni post hoc tests (Figure 9), *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.

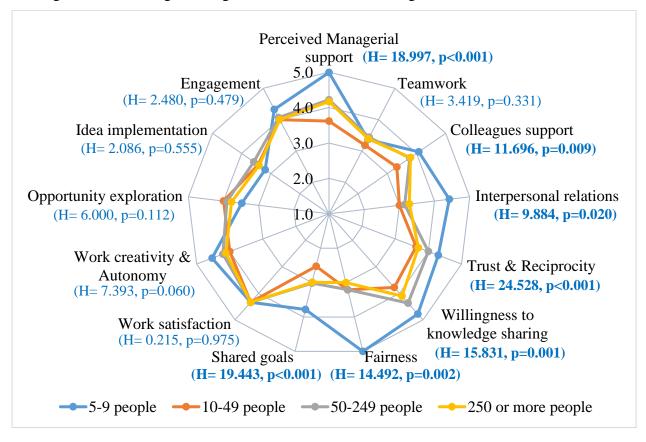


Figure 9. Comparison of the size groups of enterprises based on the mean values of the dimensions examined Source: Author's own construction

An organization with more than 250 employees is perceived as having a higher level of managerial support. In contrast, in very small organizations (6-9 employees), the indicator is considerably higher (H=18.997, p<0.001). Using regression analysis, PUTTER (2010) found a negative relationship between organizational unit size and management support. It is difficult to draw a complete analogy because, in his work, the organization was divided into three subgroups: <250, 250-1000, and >1000. At the same time, he draws the reasonable conclusion that organizational size makes it harder for management to foster a positive organizational climate and specifically decreases the level of perceived managerial support. The contradictory results illustrate explicitly the need to avoid rushing to conclusions. For this reason, future studies should utilize large sample

sizes and clearly divide the companies by size in order to gain a better understanding of the received effects.

Based on comparisons with all other employee numbers, the colleague's support indicator was lowest in organizations with 10 to 49 employees (H=11.696, p=0.009). The following can be said about colleagues' support and the size of the organization. Inconsistency in this indicator is quite understandable. The assessment of collective work can be affected by a number of factors. Regarding practical size, small size should be considered as a guide, rather than a determinant of success. Of course, a large group of individuals, such as 50 or more, can theoretically function as a collegial community. But groups of this size are more likely to break into subteams than to function as a single team (KATZENBACH & SMITH, 2005).

A very small working group (from six to nine people) has a higher level of interpersonal relations than groups of any other size (H=9.884, p=0.020). This is due to the fact that as team size increases, the psychological distance between the individuals can also increase (PEARCE & HERBIG, 2004). Smaller companies (measured by the number of employees), on the other hand, tend to be more family-oriented. Communication in those companies is less formal and more open than in formal companies, and interpersonal relationships are more friendly and relaxed due to the smaller number of links between people and the smaller number of hierarchical levels (VOKIC & HERNAUS, 2005). So, in order to enjoy the positive effects of good relationships with managers and other team members, organizations should encourage the creation of small, and therefore more intimate, teams (LEBRON *et al.*, 2019).

The level of trust and reciprocity behaves in waves depending on the number of employees in the company. It tends to be higher in small organizations (6-9 people). It decreases with a rise in team size to 49 people. In the next segment of the organization (up to 249 people), trust levels are again likely to increase. And finally, when it comes to very large companies, it tends to decrease (H=24.528, p<0.001).

Researchers tend to believe that the smaller the group of colleagues, the greater the level of trust. In SATO (1988) study, she demonstrated that trust is less effective as group size increases. As Sato explained, strategic considerations, such as diminished perceptions of the impact of one's actions on others, as well as diminished expectations about others' cooperativeness, can diminish the perceived efficacy of trust as a collective grows larger.

There are explanations for trust in large Japanese companies in the literature, but they are most likely a result of their highly specific culture. As an example, JOHNSTON & SELSKY (2005) use the terms 'dualistic constructs' and 'paradox in organizational behaviour' to describe the phenomenon. There will probably be a need for additional research in order to come to a final conclusion.

The willingness to share knowledge, depending on the size of the work team, once again demonstrates a wandering wave. As a rule, it is higher in small organizations (6-9 people). After the team size increases to 49 members, it rapidly diminishes. Then it goes up again for all the larger companies (H=15.831, p=0.001).

There is no conclusive evidence that organizational size correlates with the willingness to share knowledge in the literature review. According to LEKHAWIPAT, WEI & LIN (2018), the size of the firm is related to internal attributions and individual beliefs concerning knowledge-sharing behavior. In comparison with larger companies, smaller firms (fewer than 500 employees were considered small) are more sensitive to such barriers and individual beliefs. The difference may be attributed to the higher level of organizational support and technological advances that are exhibited by larger firms.

Conversely, employees in large organizations may require a greater amount of `storehouse knowledge` than those in small organizations, since the latter are better able to interact face-to-face with one another, and as such, use less explicit knowledge more actively than large organizations (OLIVEIRA *et al.*, 2020).

A higher level of fairness and justice was observed in small organizations (6-9 people) in comparison to all variants with larger collectives (H=14.492, p=0.002). SCHMINKE, CROPANZANO & RUPP (2002) have argued that size negatively impacts fairness for the following reasons. In large organizations, employees may experience disruptions in their relationships with their peers and supervisors. It is possible that the decrease in social integration will result in a feeling of alienation. Therefore, fewer relationships based on personal contact, combined with possible declines in politeness, courtesy, and respect, indicates a lower perception of fairness in interactions.

For all organizations, the level of the indicator of shared goals is uniformly high, except for those with a size between 10 and 49 people (H=19.443, p<0.001). The relationship between shared goals and organizational size is the subject of conflicting arguments. One argument suggests that employees in large organizations have difficulty forming personal attachments and identifying with the organization's goals. In contrast, the opposing view asserts that large organizations offer individuals greater opportunities for advancement and interpersonal interaction, which can have the opposite effect. Most of these views are based on intuition on the part of researchers. In spite of this, the evidence is far from conclusive and it is difficult to predict whether or not there is a relationship between organizational size and shared goals (GOULD-WILLIAMS, 2003).

As a whole, these results support all perceptions with *full support for Hypotheses 1*. In Table 9 (Appendix 9.4), the results of the verification of this hypothesis are also summarized and presented in a convenient manner.

# 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. All hypotheses were tested using structural equation modeling (SEM) during the verification stage. Figure 10 provides a general overview of the significant pathways among the study variables.

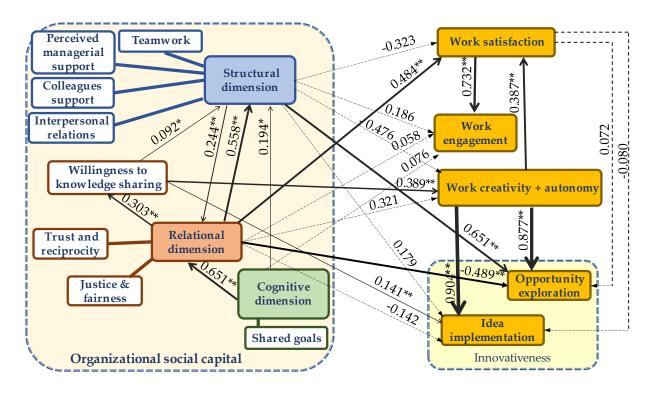


Figure 10. Path diagram illustrating significant paths among study variables

*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

The next step will involve examining each assumption within the framework of the hypotheses, as well as the results obtained and attempts to interpret them.

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

Hypothesis H2 proposes that *Cognitive OSC can be considered as a predictor of elements of work engagement* 

A suggestion was made that cognitive dimensionality can be a primary contributor to the development of work engagement. Engagement, however, cannot be adequately explained by Cognitive OSC ( $\beta$ = 0.076; S.E.= 0.039; p=0.151). So, cognitive organizational social capital did not appear to be predictive of this component of a constructive work environment.

In light of the findings, Hypothesis 2 does not appear to be supported.

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

Hypothesis H3 suggests that *Relational OSC can be considered as an influential predictor of elements of the working environment.* 

In developing the proposed model, it is important to remember that in the beginning the relational dimension of OSC reasonably encompassed three components: (1) willingness to knowledge sharing, (2) trust & reciprocity, and (3) justice & fairness. It turned out, however, that this was only partially true from a mathematical perspective. A study of the role of Relational OSC in influencing aspects of the work environment produced mixed results. Testing this hypothesis within the research model was challenging due to the fact that the Relational OSC component does not form a stable community with the other two components. The 'Willingness to knowledge sharing' began to be viewed as a related but independent element of the model. It is more accurate to consider willingness to share knowledge as an independent component of organizational social capital, which is associated with relational OSC is composed now of two constructs – 'Trust & reciprocity' and 'Justice & fairness'.

This may be explained by the following reasoning. While social capital, in general, may impact the exchange and combination of various kinds of resources, willingness to share knowledge has been viewed as a possible mediator between organizational social capital and elements of a constructive working environment (MAURER, BARTSCH & EBERS, 2011). Furthermore, this is partially supported by the fact that one of the key benefits of social capital is associated with the acquisition and transfer of knowledge (COLEMAN, 1988). In this sense, the willingness to share knowledge can be considered to facilitate the transfer of resources, including social resources, but it may not always be included in these resources. Further, in the proposed model, the willingness to share knowledge is regarded as an autonomous factor.

#### *Proposition H3a: Relational OSC* $\rightarrow$ *Willingness to knowledge sharing*

This proposition was supported by findings. Relational organizational social capital gravitated toward 'Willingness to knowledge sharing' ( $\beta$ = 0.303; S.E.= 0.051; p<0.001). Employees are more likely to cooperate and share when their contributions are valued and recognized in a reciprocal manner in fair organizational settings. Accordingly, trust and reciprocity are significant factors in determining the willingness to share knowledge (POLITIS, 2003; WICKRAMASINGHE & WIDYARATNE, 2012; AKHAVAN, & MAHDI HOSSEINI, 2015). When an organization has a trusted relationship, the knowledge transfer is assumed to be reliable and of high quality. Trust also reduces the cost associated with searching for and verifying each other's knowledge resources (DYER & CHU, 2003).

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

There is support for both this propositions in the findings. 'Willingness to knowledge sharing' predicted 'Work autonomy & creativity' ( $\beta$ = 0.389; S.E.= 0.063; p<0.001), and 'Idea implementation' ( $\beta$ = 0.141; S.E.= 0.071; p=0.002).

Each individual is free to act, individually or collectively, and is in control of their own learning and knowledge. Through the willingness to share knowledge, initiative climate facilitates the creation of new knowledge and solutions from existing knowledge and increases creativity in the workplace (LIU, KELLER, & BARTLETT, 2021).

This result also adds to existing findings in the field of recombining and applying new ideas, according to which knowledge sharing produces favourable conditions for knowledge recipients to innovate operations (MURA *et al.*, 2016). Similarly, GABBAY & ZUCKERMAN (1998) concluded that excessive brokering by individual scientists may inhibit innovation in R&D scientists networks whose effectiveness is dependent on broad sharing of information.

#### Proposition H3d: Relational $OSC \rightarrow Work$ satisfaction

Findings support this proposition. In light of previous research, this finding appears to be consistent. People who are working in a highly confident organization see themselves as valuable and important members of the organization, come to work with greater enthusiasm, and are happier at work. This is in part due to the fact that trust facilitates the effects of other determinants on desired outcomes within an organization (GUINOT, CHIVA & ROCA-PUIG, 2014).

*Proposition H3e: Relational OSC*  $\rightarrow$  *Work autonomy & creativity* 

This proposition was not supported by findings. The results of SAETHER (2020) were similar. In his research, reward allocation clarity did not result in any significant effects on creativity. In other words, creativity is not always driven by fair incentives.

#### *Proposition H3f Relational: OSC \rightarrow Opportunity exploration (Innovativeness)*

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

Researchers have already noted this type of negative effect and it can be explained as follows. As a matter of fact, changing recipients' perceptions of fairness were an integral part of their sensemaking process of innovation and its implementation of it (FEDOR, CALDWELL & HEROLD, 2006; JIAO & ZHAO, 2014). And trust predicts both the number of ideas suggested as well as the number of ideas implemented (CLEGG *et al.*, 2002). However, the benefits of organizational social capital, including trust and fairness, may also backfire on the actors. Occasionally, too much immersion in a relationship may diminish his individual strengths. As a result of over-embedding, novel ideas are unable to flow into the group, leading to inertia and parochialism (GARGIULO & BENASSI, 1999).

People may become submerged in established 'groupthink' and ignore available information sources. In such cases, organizational social capital can benefit a focal actor but have negative consequences for the broader aggregates within which the actor participates (ADLER & KWON, 2002).

KERN (1998), in a similar vein, makes the following argument. In his opinion, there is too much inter-organizational trust at present to support radical innovation. Companies are too loyal to established processes and suppliers, which is why they are slow to seek out and investigate new opportunities.

There are also other factors that may have contributed to this result, such as cultural values, which may have influenced attitudes toward exploring new opportunities more than any other. Apparently, a higher level of trust and fairness in the Hungarian working environment encourages employees to become more dependent on the team and the support of colleagues and management rather than on their own ability or desire to innovate.

The ability to innovate, think, suggest, and come up with new ideas requires collaboration rather than competition (CALLAHAN, 2002). Therefore, it may be possible to resolve this problem in the following direction.

#### *Proposition H3g: Relational OSC* $\rightarrow$ *Idea implementation (Innovativeness)*

Findings did not support this proposition, and an explanation has already been provided partly in the comments above.

Meanwhile, it would be helpful to include the following in addition to the last two propositions. Currently, creativity and innovation seem to be viewed as good, and the more the better (ANDERSON *et al.*, 2014). Nevertheless, the relentless drive for innovation without adequate social resources will inevitably result in employee burnout and the failure to establish a sustainable innovation formula. The creation of interesting ideas by employees will not result in innovation unless the organization is prepared to nurture the ideas through appropriate incubation or rapid prototyping (TIERNEY & FARMER, 2002). This illustrates the importance of a demand-resource equilibrium for aligning an organization's innovation drive with the capabilities and behaviors of its employees. According to the behavior engineering model (GILBERT, 1978), the main step toward driving innovative behavior should be to ensure that proper circumstantial arrangements are in place. As people act based on many different values, social and moral aspects should also be considered (LEVITT & DUBNER, 2009).

#### *Proposition H3h: Relational OSC* $\rightarrow$ *Engagement*

It was found that this proposition was not supported by the findings. For convenience and summary, table 4 shows details regarding the testing of hypothesis 3 for each assumption.

|     | Hypothesis/assumption   | Standardized<br>Regression<br>Coefficient<br>(β) | S.E.<br>(Standard<br>error) | р       | Conclusion       |
|-----|---|--|-----------------------------|---------|------------------|
| Н3  | Relatio   | nal OSC $\rightarrow$                            |                             |         | Partly supported |
| H3a | Relational OSC → Willingness to knowledge sharing                             | 0.303  | 0.051                       | <0.001  | Supported        |
| H3b | Willingness to knowledge sharing<br>→Work autonomy & creativity               | 0.389  | 0.063                       | < 0.001 | Supported        |
| НЗс | Willingness to knowledge sharing<br>→ Idea implementation<br>(Innovativeness) | 0.141  | 0.071                       | 0.002   | Supported        |
| H3d | Relational OSC $\rightarrow$ Work satisfaction                                | 0.484  | 0.132                       | 0.001   | Supported        |
| H3e | Relational OSC $\rightarrow$ Work<br>autonomy & creativity                    | 0.321  | 0.139                       | 0.250   | Not<br>supported |
| H3f | Relational OSC $\rightarrow$ Opportunity<br>exploration (Innovativeness)      | -0.489   | 0.150                       | < 0.001 | Supported        |
| H3g | Relational OSC $\rightarrow$ Idea<br>implementation (Innovativeness)          | -0.142   | 0.133                       | 0.121   | Not<br>supported |
| H3h | Relational OSC $\rightarrow$ Engagement                                       | 0.058  | 0.080                       | 0.456   | Not<br>supported |

**Table 4.** Details regarding the testing of hypothesis 3 for each assumption

# Thus, the Hypothesis 3 is partly supported.

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

According to Hypothesis H4 Structural OSC can be considered as an influential predictor of elements of the working environment

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

Propositions H4a & H4b: Structural  $OSC \rightarrow Work$  satisfaction and Structural  $OSC \rightarrow Work$  autonomy & creativity

The findings did not support these propositions. This shows that the structural variable becomes less significant in explaining work satisfaction and work engagement when considered alongside relational organizational social capital. Even if the advanced IT specialist's career is enhanced by participation in social networking, there is no guarantee that this will result in an inflow of independent talent or creative thinking that will benefit the organization as a whole.

# *Proposition H4c: Structural OSC* $\rightarrow$ *Opportunity exploration (Innovativeness)*

Based on the findings, this proposition can be supported. This finding appears to be consistent with previous research. A leader can affect ideas generated in their organization indirectly by creating an environment in which employees view innovative endeavors as being supported. However, a leader's primary responsibility is to provide the materials and environment in which teams can engage in creative thinking and exchange new ideas (HUNTER & CUSHENBERY, 2011). Exactly in this manner, with the help of management and the team, conditions can be created for the exploitation of opportunities.

Employees gather information, get help from colleagues, and cooperate with each other in times of crisis and emergency. As a result of their friends' and colleagues' advice, they have been able to resolve problems and propose innovative and effective solutions to face challenges (BASU, PRADHAN & TEWARI, 2017).

# *Proposition H4d: Structural OSC* $\rightarrow$ *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. HANSEN's (1998) research on social capital shows, for example, that project teams with strong connections to other units often perform their tasks

more slowly than those with weak connections. In spite of the fact that these strong ties provided benefits in terms of information, they were too expensive to maintain. Unlike strong work relationships, Hansen believes that weak relationships are more effective than strong ones, not only because they provide access to nonredundant information but also because they are less expensive to maintain.

In WOOLCOCK's (1998) analysis of social capital and economic development, options are offered for setting a balance in similar cases. This analysis involves the development of a two-by-two matrix that contrasts cases with high (many and strong) versus low (few and weak) linkages, and, in the second dimension, links within the focal group (bonding) versus links to others outside the group (bridging). It is obvious that groups and societies with no external ties or internal ties are likely to have low stock of social capital. The high-high configuration is equally obvious to hold significant promise. A pair of off-diagonal cells indicates two generic risks associated with social capital. In the first instance, a high level of internal links combined with a low level of external links may create a situation in which internal solidarity may undermine the actors' ability to become integrated into the broader framework. When ties are arranged in this manner, the whole could be isolated and fragmented. Another configuration that may be dysfunctional is one that has high external ties but low internal ties.

As previously mentioned (AXEL *et al.*, 2000), the implementation of ideas is strongly influenced by both group and organizational characteristics. In this regard, it is pertinent to note that a team's idea implementation and performance can also be negatively affected by unwanted phenomena. This can lead to poor operating decisions and a loss of performance. At the point of idea implementation, demographic differences may cause a team to develop 'faultlines' (LAU & MURNIGHAN, 2005), resulting in competition and conflict among its members. As a result, although teamwork in itself appears to be a bit tricked, studies of teamwork have further argued that the organizational context within which the teams operate entails additional risks (FAY *et al.*, 2015).

#### *Proposition H4e: Structural OSC* $\rightarrow$ *Work engagement*

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

Table 5 provides details regarding the testing of hypothesis 4 for each assumption for the convenience of the reader.

| Hypothesis/assumption | Standardized<br>Regression | S.E.<br>(Standard<br>error) | р | Conclusion |
|-----------------------|----------------------------|-----------------------------|---|------------|
|-----------------------|----------------------------|-----------------------------|---|------------|

**Table 5.** Details regarding the testing of hypothesis 4 for each assumption

|     | Coefficient<br>(β)  |               |          |        |                  |
|-----|---|---------------|----------|--------|------------------|
| H4  | Stru  | ictural OSC – | <b>~</b> |        | Partly supported |
| H4a | Structural OSC $\rightarrow$ Work satisfaction                  | -0.323        | 0.137    | 0.056  | Not<br>supported |
| H4b | Structural OSC $\rightarrow$ Work autonomy & creativity         | -0.476        | 0.170    | 0.203  | Not<br>supported |
| H4c | Structural OSC →<br>Opportunity exploration<br>(Innovativeness) | 0.651         | 0.153    | <0.001 | Supported        |
| H4d | Structural OSC → Idea<br>implementation<br>(Innovativeness)     | 0.179         | 0.156    | 0.127  | Not<br>supported |
| H4e | Structural OSC $\rightarrow$ Work<br>engagement                 | 0.186         | 0.096    | 0.071  | Not<br>supported |

Source: own calculations

#### As a result, it can be concluded that Hypothesis 4 is only partially supported by the findings.

#### **5.6** The hierarchical structure of organizational social capital elements (H5)

Hypothesis 5 is based on the premise that organizational social capital elements are mutually dependent on one another. Further, it acknowledges that these dependencies may be hierarchical. In order to address this issue, it is worthwhile to start by considering each of the assumptions that have been proposed.

#### Proposition H5a: Shared goals $\rightarrow$ Relational OSC

This proposition was supported by the findings of the study. In line with previous research, this finding is quite consistent. Additionally, to the studies it has already highlighted, when establishing a hypothesis (SONG *et al.*, 2019; HUANG *et al.*, 2020), it is also important to note that trust and justice together facilitate organizational goal congruence (CUGUERÓ-ESCOFET, FITÓ BERTRAN & ROSANAS, 2019). Moreover, if one views the issue from a broader perspective, it appears that trust moderates the relationship between shared goals and motivations to share knowledge (NADEEM *et al.*, 2021).

#### *Proposition H5b: Shared goals* $\rightarrow$ *Structural OSC*

Our model in particular provide us with an opportunity to examine the mechanism of dependency between the OSC elements. To test this assumption, it has developed two working directions of explanation. Cognitive social capital formed by 'Shared goals' is fully explanatory for Relational OSC ( $\beta$ = 0.651; S.E.=0.053; p<0.001) as well as Structural OSC ( $\beta$ = 0.194; S.E.=0.076; p=0.041). It is important to emphasize that the strength of the relationship between these orientations

suggests that Cognitive OSC serves as a primary source and root cause for the entire structure of organizational social capital. This is quite consistent with previous findings by CHOWDHURY & MURZI (2019), CHEN et al. (2019), and LAACK (2021).

#### Proposition H5c: Relational $OSC \rightarrow Structural OSC$

According to the findings of the study, this proposition is supported. A high level of interpersonal trust among team members encourages open discussion, understanding of work-related problems, and effective communication within a team (POLITIS, 2003). Having a high level of trustworthiness enables an individual to be more approachable and communicate with others, thereby enhancing the quality of their interpersonal relations (WILLEM & SCARBROUGH, 2006).

Reciprocal resource gain spiral forms between coworker-based perceived social support and trust, which leads to coworkers investing personal resources into each other across workdays (HALBESLEBEN & WHEELER, 2015)

#### Proposition H5d: Willingness to knowledge sharing $\rightarrow$ 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 ( $\beta$ = 0.092; S.E.= 0.048; p=0.025). Indeed, the most commonly used method of knowledge-sharing intentions is face-to-face communication in teamwork, with less reliance on external tools or resources. When colleagues have a positive attitude toward knowledge sharing, they are more likely to share their knowledge with their colleagues (ZHANG & NG, 2012).

Intentions of sharing knowledge also have influenced interpersonal bonds (GOLDEN & RAGHURAM, 2010). This illustrates the importance of face-to-face interaction as a means of increasing interest in knowledge sharing by providing opportunities for further ties to be formed, self-disclosure to be made, and a greater understanding of one another (REN, KRAUT & KIESLER, 2007). It is therefore incumbent upon managers to support and enrich the relationships formed through interpersonal interactions.

The previous research also established that organizational support as part of organizational citizenship behaviors is directly related to a greater willingness to share information. On the other hand, enhanced organizational support can activate employees' extra-role behavior level, which leads to a higher level of knowledge sharing when there is a complementary acknowledgment of the characteristics of their roles (HAN *et al.*, 2019).

*Proposition H5e: Structural OSC*  $\rightarrow$  *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 ( $\beta$ = 0.244; S.E.=0.081; p=0.006).

#### It is already evident at this stage of the discussion that Hypothesis 5 is supported by the data.

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 11 displays this simplified ratio of elements.

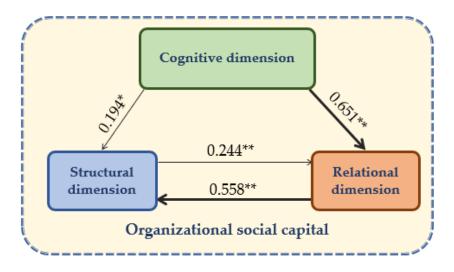


Figure 11. Clipping from the path diagram illustrating significant paths among organizational social capital elements

*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

For each assumption, the details of testing hypothesis 6 are presented in the table below.

| Table 6. Details | regarding the | testing of hypothesis 5 | for each assumption |
|------------------|---------------|-------------------------|---------------------|
|                  |               |                         |                     |

|     | Hypothesis   | Standardized<br>Regression<br>Coefficient<br>(β) | S.E.<br>(Standard<br>error) | р       | Conclusion |
|-----|--|--|-----------------------------|---------|------------|
| H5  | <b>Cognitive OSC</b> $\rightarrow$ <b>Relation</b>   | nal OSC → Strı                                   | ictural OSC                 |         | Supported  |
| H5a | Shared goals $\rightarrow$ Relational OSC            | 0.651  | 0.053                       | < 0.001 | Supported  |
| H5b | Shared goals $\rightarrow$ Structural OSC            | 0.194  | 0.076                       | 0.041   | Supported  |
| H5c | Relational OSC $\rightarrow$ Structural OSC          | 0.558  | 0.132                       | < 0.001 | Supported  |
| H5d | Willingness to knowledge sharing<br>→ Structural OSC | 0.092  | 0.048                       | 0.025   | Supported  |
| H5e | Structural OSC $\rightarrow$ Relational OSC          | 0.244  | 0.081                       | 0.006   | Supported  |

#### Source: own calculations

In the chain of Cognitive OSC  $\rightarrow$  Structural OSC  $\rightarrow$  Relational OSC, there is a connection, but it is weak. While at the same time, the chain of Cognitive OSC  $\rightarrow$  Relational OSC  $\rightarrow$  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.

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

In accordance with Hypothesis H6 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.

#### Proposition H6a: Work satisfaction $\rightarrow$ Work engagement

This proposition was confirmed. 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 ( $\beta$ = 0.732; S.E.=0.080; p=<0.001). A happy employee will work hard for the organization and will have a high level of engagement. It is imperative that the organization pay attention to this issue and develop a policy or a strategy related to work satisfaction so that the employees are motivated to perform at their best.

It is important to note, however, that the significance of this observation is somewhat broader. Further, in this case, relational organizational social capital shows both general and specific indirect effects on work engagement and satisfaction. On the one hand, relational OSC had no statistically significant effect on work engagement ( $\beta = 0.058$ , p = 0.456). However, there were specific indirect effects through work satisfaction ( $\beta = 0.484$ ; S.E.=0.132; p = 0.001) which then led to work engagement ( $\beta = 0.732$ ; S.E.=0.080; p=<0.001).

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

Defining both elements of innovativeness by 'Work autonomy & creativity' is a strong and confident statement (opportunity exploration:  $\beta = 0.877$ ; S.E.=0.278; p=<0.001; idea implementation:  $\beta = 0.904$ ; S.E.=0.279; p=<0.001). A positive relationship existed between freedom and autonomy and various types of innovative behavior, including the generation of ideas and the exploration of opportunities. In order for individuals to engage in innovative behaviors, freedom and autonomy should improve their perception of being in control of their situation and

provide relief from perceived process gaps (HUNTER & CUSHENBERY, 2011). As ideas are transformed into innovations, interpersonal contacts facilitate the sharing and discussion of ideas, thus allowing good ideas to mature faster and poor ideas to be abandoned sooner.

And also, quite predictably, it appears that if an organization is able to provide an environment that supports creativity and autonomy for its employees, the innovative endeavors of employees in terms of exploring opportunities and implementing ideas will be strengthened. Accordingly, the findings of the study contribute to the literature of AMABILE (1997), BARON & TANG (2011), and HUGHES *et al.* (2018). It's because the sense of autonomy is correlated with a sense of responsibility and increase in intrinsic motivation, which is associated with the conception and implementation of new ideas (FAY *et al.*, 2015).

# Proposition H6d: Work autonomy and creativity $\rightarrow$ Work satisfaction

Based on the results of the study, this proposition appears to be supported ( $\beta$ = 0.387; S.E.=0.158; p=<0.001). Creativity is often characterized by the internal stimulus that is derived from the intrinsic motivation of the individual to create, which is represented by the pleasure derived from the creative process and its outcome. In fact, the satisfaction provided by creative thinking and the generation and application of creative ideas may be one of the key factors contributing to the efficacy cycle of creativity (PARJANEN, 2012; TORRANCE, 2018).

Propositions H6e & H6f Work satisfaction  $\rightarrow$  Opportunity exploration (Innovativeness) & Work satisfaction  $\rightarrow$  Idea implementation (Innovativeness)

The findings did not support these propositions. Based on this analysis, the work satisfaction variable becomes less significant in explaining innovative behavior.

Below is a table containing the details of testing hypothesis 6 for each assumption.

|     | Hypothesis/assumption   | Standardized<br>Regression<br>Coefficient<br>(β) | S.E.<br>(Standard<br>error) | р       | Conclusion |
|-----|---|--|-----------------------------|---------|------------|
| H6  | H6 The predicted elements of the working environment, such as work<br>engagement, work satisfaction, idea implementation, opportunity<br>exploration, autonomy & creativity, have positive interactions with one<br>another |  |                             |         | Supported  |
| Нба | Work satisfaction $\rightarrow$ Work<br>engagement  | 0.732  | 0.080                       | < 0.001 | Supported  |
| H6b | Work autonomy and<br>creativity → Opportunity<br>exploration<br>(Innovativeness)  | 0.877  | 0.278                       | <0.001  | Supported  |

**Table 7.** Details of testing hypothesis 6 for each assumption

| Н6с | Work autonomy and<br>creativity → Idea<br>implementation<br>(Innovativeness) | 0.904  | 0.279 | <0.001 | Supported        |
|-----|--|--------|-------|--------|------------------|
| H6d | Work autonomy and<br>creativity → Work<br>satisfaction                       | 0.387  | 0.158 | <0.001 | Supported        |
| Нбе | Work satisfaction →<br>Opportunity exploration<br>(Innovativeness)           | 0.072  | 0.090 | 0.275  | Not<br>supported |
| H6f | Work satisfaction → Idea<br>implementation<br>(Innovativeness)               | -0.080 | 0.119 | 0.266  | Not<br>supported |

Source: own calculations

At the end of the analysis, it must be concluded that *Hypothesis 6 can be partially supported*.

As can be seen in the generalized table devoted to path hypotheses (Table 12 in Appendices), one hypothesis is not supported, two hypotheses are partially supported, and two are fully supported. Consequently, the results of this study support the perspective of the importance of social capital within organizations and partially positive interactions among elements of the working environment.

#### 6 CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND FUTURE DIRECTIONS

The conclusion of the study is summarized in this chapter. This chapter consists of three main sections. An overview of the findings and their importance for theory and practice are presented in the first section, while recommendations are provided in the second section. A discussion of the study's limitations and future directions is presented in the third section.

### 6.1 Conclusions

The main research objective of this study was to clarify the conceptualization of organizational social capital. The first step in achieving this goal was to review the literature. As suggested by LEANA & VAN BUREN (1999), the empirical work on organizational social capital has begun with the refinement of its components and the development of specific measures and indicators. While this highlighted the difficulties and complexity associated with the term 'organizational social capital', it also provided us with information about the characteristics and aspects of organizational social capital in general and the categories of organizational social capital in particular.

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. Thus, this research proposes a novel empirically proven conceptualization of organizational social capital and empirically proves the validity of the model.

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. At least in part, the desire to fill in these gaps explains the uniqueness of this research approach and its differences from previous similar studies.

Based on the findings of this study, an integrative model can be used to analyze the relationships between OSC dimensions, as well as some elements of a constructive work environment. 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 capital 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, company sizes, and positions in an organization in terms of the comparative evaluation parameters of elements of the working environment. In accordance with the related hypothesis, all of these comparisons can be useful for future studies on Hungarian workplaces.

The workplace has evolved greatly since the days of crowded mass production factories in the early 1900s. Researchers and economists alike may recognize this. There is a vast difference between what was required then and what is required today. As a consequence of this study, it is hoped that readers will begin to view workers as individuals rather than simply as a set of hands. People are social beings who have social needs, like all other living organisms. In spite of the views of some economists, humans need more than just money to survive. Hopefully, researchers will build the foundation of social capital in organizations in order to reestablish the humanity of workers.

#### 6.2 Recommendations

The workers are human beings and require human interaction. Those companies that provide their workers with the opportunity to create organizational social capital are more likely to maintain

their workers and their investments. This is why future policies should strive to recreate the tools that will allow us to study the organization of work in more depth. Taking this meaning into account, social capital offers insights into the constructive processes and changes occurring within organizations. The implications of this dissertation are not only in the conceptualization of organizational social capital but also in the implications for practitioners. The findings of this study indicate that the favorable aspects of social capital largely outweigh the potential `dark side` (BAYCAN & ÖNER, 2022). Managers who wish to foster organizational social capital in their organizations are given policy and practical recommendations that are intended to not only facilitate the use of performance information but also to increase the constructive elements of the workplace. 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. Thus, cognitive element is at the heart of organizational social capital. These results highlight the importance of fostering this aspect when building a development policy as a means of strengthening structural and relational organizational social capital.

As a result of the discussion above, the chain of managerial changes in practice may look as follows:

(1) Building organizational social capital begins with the development of a sense of community within the organization which is centered on shared goals. The cognitive component of organizational social capital is formed during this stage, and this will form the basis for all future efforts.

(2) This will enable it to move on to the next stage - the development of the relational dimension. By emphasizing fairness and trust and encouraging information exchange, it is possible to establish a value-organizational element that will further define the nature and extent of working relationships.

(3) During the third stage, it will be possible to see how the previous efforts have affected the results. This includes the quality of interpersonal working relationships, coordination of teamwork, and the availability of support from both managers and colleagues. The structural dimension has now been formed, and the integrity of the organizational social capital system is consolidated.

This sequence helps to understand the dynamics of organizational social capital and remove all barriers that could impede its growth. Therefore, managers in the training and development departments should recognize the importance of elements of organizational social capital formation sequences in the planning and organization of work.

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.

How can we achieve cognitive mutuality? Cognitive psychologists generally hold that mutual cognitions can be inferred from mutual background conventions and heuristics. The goal of achieving a coordinated mind involves participants acknowledging global conventions and prioritizing the rationality of other participants (e.g., LEWIS, 1969; GARROD & DOHERTY, 1994; CENTOLA *et al.*, 2018). Therefore, it is important to hire individuals who have an inclination to the elements of organizational social capital required to exhibit the behaviors required by their organization and retaining them so they can continuously develop the necessary working environment. In order to accomplish such planning and monitoring, it is possible, for example, to adapt the questionnaire from this dissertation for use, both in direct and projection forms.

As part of the development of the last thought and with respect to the part relating to applied meanings, it would be appropriate to include the following. In spite of a theoretical understanding and the acceptance of novel concepts in the management of the organizational environment, HR departments may lack the necessary diagnostic tools and assessments of the current state of affairs. The questionnaire developed on the basis of a solid literary basis and then verified through statistical analysis may be considered a scientifically-based tool for solving such problems.

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.

#### 6.3 Limitations and future directions

In spite of the need for such a study in organizations, its capabilities remain limited. Some of the limitations listed below relate to the analysis itself, while others relate to the sampling and conceptualization of the data. This section describes some of the most important limitations of the study, although it is not an exhaustive list. Additionally, it identifies some limitations and future directions for research.

The first potential problem is the possibility of self-selection. Reliance on self-report data may result in common method variance (CMV) bias (PODSAKOFF, MACKENZIE & PODSAKOFF, 2012). CMV bias is not a concern in the study based on the CFA analyses and interaction effect test (SIEMSEN *et al.*, 2010). However, the fact that this study relied on self-reporting may have created the potential possibility of common method bias. So, future research should overcome the dependence of the investigation on self-report data.

Second, although a back translation was used and additional measures were taken to guarantee the validity and avoid cultural bias, the level of equivalence may be a concern (FARH *et al.*, 2006). The measurements of the factors were taken from literature written in English, as well as some items adapted from Western sources, which may pose some intangible barriers to translation into Hungarian. And future research studies better focus on developing measures for OSC-related research in Hungarian (or other relevant) culture.

The reality is that there are numerous human or organizational factors influencing certain aspects of the working environment, and the latter can act as a moderating or intermediary factor. Various factors could be considered in further studies such as those pertaining to the character of work, in order to examine the specifics of the research model in relation to white-collar and blue-collar workers separately. Also, ownership of the organization may play a significant role in influencing the results (local and foreign owners are likely to establish different standards of internal organizational relations).

In order to get more specific guidance, organizations can use linkage analysis, i.e. - combining employee research and monetary data - to quantify the economic impact of denoted chains of determination in an organizationally specific way, as well as consider the potential costs and outcomes of making various changes to improve the working environment.

The focus of the study is primarily on the elements of intra-organizational social capital. Furthermore, it is necessary to expand the scope of the study by examining both the bridging and bonding effects of social capital, as well as the differing effects of individual and group social capitals. Measuring these variables remains an obstacle, although future research could be focused on this area.

An in-depth study is needed to identify the factors that promote a smooth dimensional transfer of OSC benefits. There is potential value in developing concepts for such cross-dimensional transfers. Hence, future studies should investigate the mechanisms that may underlie them.

As a result of the cross-sectional nature of the study, the results are limited to a snapshot in time. Due to time and resource constraints, this study adopted a cross-sectional research design and examined several Hungarian companies at a single point in time. In the future, if longitudinal studies are conducted on these constructs, they may reveal other interesting relationships among them. By developing a time-series database and testing the structural relationships among the study constructs in a longitudinal framework, more insights would be gained into possible causation as well as further understanding of the model as well as improving its theoretical validity.

The study was conducted in Hungary in a variety of organizations from a range of industries. The research model may therefore be further tested with samples from other countries, since cultural differences may influence people's perceptions of OSC elements. Therefore, further testing should provide a more robust assessment of the hypotheses. Particularly, a variety of contextual factors from the external business environment should be considered (sociocultural, technological, legislative-political, and international), so that causality can be fully established and a broader generalization can be achieved. Additionally, the results of such a study may provide a reference for organizations in other countries that experience similar external environments as Hungary.

It is unknown how elements of organizational social capital are valued differently by different ethnicities or cultures, even in Hungary. By understanding how to deliver the message of organizational social capital in a way that is specific to each individual, there would be a greater likelihood of understanding and incorporating its positive qualities into research. Individuals may construct organizational social capital and relationships in different ways due to historical differences between their national cultures. Since employees are required to work with people from a variety of cultural backgrounds at work, research should explore how cross-cultural relationships can be built and maintained. In spite of the attention that is given to national disparities, it is important that researchers gain a better understanding of the range of options available to workers when it comes to developing lasting relationships. Alternatively, another national group may overlook what one group deems to be a viable alternative. Understanding and incorporating what each country has to contribute to the challenge can be a key opportunity to learn from another person.

In most organizational social capital research, efforts are initially made to determine the positive effects of organizational social capital. The findings of this study demonstrate that this is only a partial picture. There is also a need for further research to focus on the negative or contradictory aspects of social capital within organizations as well. There is a possibility that organizational social capital capital capital capital capital capital social capital capita

### 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.

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#### 8 SUMMARY

Data collected from 405 Hungarian employees were used in empirical study to validate research model and hypotheses. IBM SPSS Statistics 27 and AMOS 23.0 were utilized for the statistical evaluations. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) was used for construct validation. In accordance with the empirical results of the study, the final 62-item instrument that measures various aspects of organizational social capital in a professional setting is reliable and valid. Based on the analyzes, it was determined that cognitive, relational, and structural capital are three principal dimensions of social capital that are distinct but related.

A set of six hypotheses was derived and validated on the basis of the identified constructs. An empirically validated model of eight dimensions and thirty items was developed to assess various aspects of organizational social capital in a work environment. Relationships among OSC components were examined using structural equation modeling (SEM). It was observed during the validation of the hypotheses confirms the interconnections between the three dimensions of social capital: the cognitive dimension significantly impacts the relational dimension, while the relational dimension, subsequently, influences the structural dimension. In order to determine if there were any differences in distribution of values of research dimensions 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. In order to examine differences between managers and subordinates, the Mann–Whitney test was applied.

As the first and most important scientific contribution of this study, it presents an original conceptualization of organizational social capital, along with a model explaining the components and consequences of this construct. The study examined three forms of social capital - cognitive, relational, and structural - within Hungarian professional relationships. It has been clearly proven that of the three elements of organizational social capital, the cognitive dimension is the preferred basis of the relational dimension, which in turn determines largely the structural element.

In this study also, a system-focused perspective has been proposed, which highlights the antecedents as well as the outcome of the relationship between elements of organizational social capital and constructive elements of the working environment. In order to support the conceptual model proposed, a detailed literature review was conducted. As discussed earlier in the chapters, the model that was proposed reveals significant findings regarding organizational schematics.

It has been examined for the first time, in this study, the relationship between the elements of organizational social capital and aspects of the work environment, including innovativeness, creativity, engagement at work, and work satisfaction.

In the proposed organizational social capital model, individuals and their choices are analyzed in light of both material and non-material motivations for participation within a social context, thus adding depth and breadth to the ongoing discussion about the success of organizations.

In every organization where humans work, organizational social capital avenues are available. The area contains untapped resources that have the potential to be vital for the sustenance of the organization. In summary, limitations, implications, and future research can be positioned around the idea of understanding and fostering organizational social capital. The promotion of organizational social capital is a win-win situation for both workers and employers.

### 9 APPENDICES

### 9.1 References

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# 9.2 Questionnaire

### Issues related to labor market status and the workplace (8 items)

| N₂ |   |  |
|----|---|--|
| q1 | What is your current main labor market    | Mi az Ön jelenlegi fő munkaerőpiaci          |
|    | status?                                   | státusza?                                    |
|    |   | (1) Alkalmazott                              |
|    | (1) Employee                              | (2) Önfoglalkoztató, önálló vállalkozó       |
|    | (2) Self-employed, freelancer             | (szellemi szabadfoglalkozású, egyéni         |
|    | (3) Entrepreneur (employs employee) (s))  | vállalkozó, nincs alkalmazottja)             |
|    | (4) Unemployed                            | (3) Vállalkozó (alkalmazott(ak)at            |
|    | (5) Full-time student in higher education | foglalkoztat)                                |
|    | (6) Child care                            | (4) Munkanélküli                             |
|    | (7) Housewife, other inactive             | (5) Nappali munkarenden felsőoktatási        |
|    |   | hallgató                                     |
|    |   | (6) CSED-en, GYED-en, GYES van               |
|    |   | (7) Háztartásbeli, egyéb inaktív (eltartott) |
|    | I appreciate your participation, but the  | Köszönöm, hogy részt szeretne venni a        |
|    | survey focuses on organizational capital  | felmérésben, de a felmérés a szervezeti      |
|    | and applies only to employees of          | tőkére irányul, és csak a magyar             |
|    | Hungarian companies, so unfortunately the | vállalkozások alkalmazottjaira vonatkozik,   |
|    | questions are not relevant to you. Best   | így a kérdések sajnos nem relevánsak az Ön   |
|    | regards, Borisov Igor PhD candidate       | esetében. Köszönettel: Borisov Igor          |
|    |   | doktorjelölt                                 |
| q2 | What is your position?                    | Mi a beosztása?                              |
|    | — manager or boss                         | — Vezető                                     |
|    | — subordinate employee                    | — Beosztott                                  |
| q3 | How many years have you been in your      | Hány éve dolgozik a cégnél/vezeti a          |
|    | company?                                  | vállalkozást?                                |
|    | less than 1 year                          | Kevesebb mint 1 éve                          |
|    | 1-2 years                                 | 1-2 éve                                      |
|    | 3-5 years                                 | 3-5 éve                                      |
|    | 6-10 years                                | 6-10 éve                                     |
|    | more than 10 years                        | több mint 10 éve                             |
| q4 | Are you working in the ?                  | Az Ön munkahelye                             |
|    | Public                                    | Állami szféra                                |
|    | Private                                   | Piaci szféra                                 |
|    | Non-for-profit sector or an NGO           | Nonprofit szféra (egyház, alapítvány stb.)   |
| q5 | What is the main activity sector of your  | Mi a cége fő tevékenységi köre?              |
|    | company?                                  |  |
|    | Production                                | Termelés                                     |
|    | Construction                              | Építkezés                                    |
|    | Service                                   | Szolgáltatás                                 |

| q6 | How many people does the company currently employ?   | Hány főt foglalkoztat jelenleg a vállalkozás?   |
|----|--|---|
| q7 | 0-9 people<br>10-49 people<br>50-249 people<br>250 or more people<br>How many years has the company been<br>established?<br>less than 1 year<br>1-2 years<br>3-5 years<br>6-10 years<br>more than 10 years   | 0-9 fő<br>10-49 fő<br>50-249 fő<br>250- fő<br>Hány éve alapították a céget?<br>Kevesebb mint 1 éve<br>1-2 éve<br>3-5 éve<br>6-10 éve<br>több mint 10 éve  |
| q8 | In which region is the company located?<br>Budapest<br>Southern Great Plain (Bács-Kiskun,<br>Békés, Csongrád)<br>Southern Transdanubia (Baranya,<br>Somogy, Tolna)<br>Northern Great Plain (Hajdú-Bihar, Jász-<br>Nagykun-Szolnok, Szabolcs-Szatmár-<br>Bereg)<br>Northern Hungary (Borsod-Abaúj-<br>Zemplén, Heves, Nógrád)<br>Central Transdanubia (Fejér, Komárom-<br>Esztergom, Veszprém)<br>Western Transdanubia (Győr-<br>Moson-Sopron, Vas, Zala)<br>Pest | Melyik régióban található a vállalkozás<br>székhelye?<br>Budapest<br>Dél-Alföld (Bács-Kiskun, Békés, Csongrád)<br>Dél-Dunántúl (Baranya, Somogy, Tolna)<br>Észak-Alföld (Hajdú-Bihar, Jász-Nagykun-<br>Szolnok, Szabolcs-Szatmár-Bereg)<br>Észak-Magyarország (Borsod-Abaúj-<br>Zemplén, Heves, Nógrád)<br>Közép-Dunántúl (Fejér, Komárom-<br>Esztergom, Veszprém)<br>Nyugat-Dunántúl (Győr-Moson-Sopron,<br>Vas, Zala)<br>Pest |

# Shared goals (SHG) (4 items)

| SHG1 | In my organization, employees share   | Vállalatunknál az alkalmazottaknak          |
|------|---------------------------------------|---|
|      | the same ambitions and vision for the | ugyanazok ambíciói és elképzelései vannak a |
|      | organization                          | szervezetről                                |
| SHG2 | In my organization, employees         | Vállalatunknál az alkalmazottak lelkesen    |
|      | enthusiastically pursue collective    | követik a közös célokat és küldetést        |
|      | goals and mission                     |   |
| SHG3 | There is a commonality of purpose     | Az alkalmazottaknak közös céljai vannak.    |
|      | among employees in this organization  |   |
| SHG4 | Employees in this organization are    | Az alkalmazottak elkötelezettek a szervezet |
|      | committed to the goals of the         | céljai mellett                              |
|      | organization                          |   |

## Trust & reciprocity (TRUST) (4 items)

| TRUST1 | There is mutual friendship between | A munkatársak közötti viszonyokat             |  |
|--------|------------------------------------|---|--|
|        | employees                          | kölcsönös segítségnyújtás, barátság jellemzi. |  |
| TRUST2 | Employees have confidence in one   | Az alkalmazottak bíznak egymásban.            |  |
|        | another in this organization       |   |  |

| TRUST3 | Employees in this organization show a | Az alkalmazottak tisztességesen és etikusan |
|--------|---------------------------------------|---|
|        | great deal of integrity               | cselekednek.                                |
| TRUST4 | There is team spirit among employees  | Csapatszellem uralkodik a szervezetben.     |
|        | in this organization                  |   |

## Willingness to knowledge sharing (WKS) (3 items)

| WKS1 | I actively share my professional      | Szakmai tudásomat aktívan megosztom        |
|------|---------------------------------------|--|
|      | knowledge with my colleagues          | kollégáimmal                               |
| WKS2 | I share my ways to solve problems at  | A csoporttagok kérésére megosztom a        |
|      | the request of other group members    | problémák megoldásának módjaimat.          |
| WKS3 | The company often arranges events for | A cég gyakran szervez tudáscserét szolgáló |
|      | knowledge exchange (e.g., seminar,    | rendezvényeket (pl. szemináriumokat,       |
|      | presentation, etc.)                   | prezentációkat stb.).                      |
| WKS4 | The exchange of information is        | Cégem vezetése ösztönzi az                 |
|      | encouraged by the company's           | információcserét.                          |
|      | leadership.                           |  |
|      | My company's management               |  |
|      | encourages information exchange.      |  |

#### Interpersonal relations (PSR) (3 items)

| PSR1 | The company provides training to      | A vállalat képzéseket biztosít az            |
|------|---------------------------------------|--|
|      | improve the interpersonal skills of   | alkalmazottak interperszonális készségeinek  |
|      | employees to build good relationships | fejlesztése érdekében, hogy jó kapcsolatokat |
|      |                                       | építsenek ki egymással.                      |
| PSR2 | Personal relationships in our company | A vállalaton belüli személyes kapcsolatok    |
|      | encourage a trustful working          | bizalmi munkakörnyezet kialakítására         |
|      | environment.                          | ösztönöznek.                                 |
| PSR3 | I look forward to being with the      | Őszinte jó kedvvel indulok munkába és alig   |
|      | people I work with each day.          | várom, hogy beérjek és találkozhassak a      |
|      |                                       | kollégáimmal.                                |

#### Teamwork (TW) (3 items)

| TW1  | My company encourages employee teamwork.  | Cégem ösztönzi a csapatmunkát.    |
|------|---|-----------------------------------|
| TW2. | Teamwork is part of the problem-          | Cégemnél a csapatmunka a          |
|      | solving process at my company.            | problémamegoldás része.           |
| TW3  | I feel I am really a part of the group of | Úgy érzem, valóban tagja vagyok a |
|      | people I work with.                       | munkahelyi kollektívának.         |

#### Managerial support (MNGSP) (5 items)

| MNGSP1 | My supervisor provides me with clear | A felettesem egyértelmű elvárásokat |
|--------|--------------------------------------|-------------------------------------|
|        | expectations of my work              | támaszt a munkaköri feladataimmal   |
|        | responsibilities.                    | kapcsolatban.                       |

| MNGSP2 | My supervisor is supportive when I have a work problem.                                       | A felettesem segít, ha munkahelyi problémám van.                 |
|--------|---|--|
| MNGSP3 | My supervisor treats my mistakes as a problem to be solved rather than a focus for criticism. | Kritizálás helyett a felettesem inkább<br>segíteni próbál nekem. |
| MNGSP4 | My supervisor explains the reasoning<br>behind decisions that affect me.                      | A felettesem elmagyarázza az engem<br>érintő döntések indokait.  |
| MNGSP5 | My supervisor communicates with me in an open and direct manner.                              | A felettesem nyíltan és közvetlen<br>módon kommunikál velem.     |

# Colleagues support (CLGSP) (4 items)

| CLSP1 | In our team, we openly share our    | Csapatunkban nyíltan megosztjuk           |
|-------|-------------------------------------|---|
|       | thoughts without fear of rejection. | gondolatainkat anélkül, hogy félnénk az   |
|       |                                     | elutasítástól.                            |
| CLSP2 | I can rely upon my coworkers        | Bízhatok a munkatársaimban, különösen     |
|       | especially when things get tough at | akkor, ha a munkám során nehézségek       |
|       | work.                               | merülnek fel.                             |
| CLSP3 | My work team is one of the most     | A munkahelyi kollektíva az egyik          |
|       | meaningful social groups to which I | legfontosabb közösség, amelyhez           |
|       | belong.                             | tartozom.                                 |
| CLSP4 | Frequently, my colleagues offered   | Kollégáim gyakran felajánlanak            |
|       | me assistance when the situation    | segítséget, amikor a helyzet úgy kívánja. |
|       | called for it.                      |   |

#### Justice & fairness (FRNS) (4 items)

| FRNS1 | My organization treats its employees fairly   | Vállalatunk igazságosan bánik az<br>alkalmazottakkal.                              |
|-------|---|--|
| FRNS2 | My organization rewards employees<br>according to their performance                     | Vállalatunk az alkalmazottakat<br>teljesítményüknek megfelelően<br>jutalmazza.     |
| FRNS3 | Employees in my organization are rewarded fairly  | Vállalatunk alkalmazottai tisztességes<br>jutalmazásban részesülnek                |
| FRNS4 | Employees can count on being treated<br>with courtesy and respect in my<br>organization | Vállalatunk alkalmazottjai udvarias és<br>tisztességes bánásmódban<br>részesülnek. |

# Work satisfaction (STSF) (5 items)

| STSF1 | The work I do on my job is           | Az általam végzett munka fontos        |
|-------|--------------------------------------|--|
|       | meaningful to me.                    | számomra.                              |
| STSF2 | I feel I am being paid a fair amount | Úgy érzem, tisztességes fizetést kapok |
|       | for the work I do.                   | az elvégzett munkámért.                |

| STSF3 | When I do a good job, I receive the recognition for it that I should receive. | Elismerik a jól elvégzett munkámat. |
|-------|---|-------------------------------------|
| STSF4 | I like doing the things I do at work.   | Szeretem a munkámat.                |
| STSF5 | I feel a sense of pride in doing my   | A jól végzett munka sikere          |
|       | job.  | büszkeséggel tölt el.               |

## Work creativity & autonomy (CRTV) (5 items)

| CRTV1 | I really enjoy a task that involves<br>coming up with new solutions to<br>problems.     | Szeretek új megoldásokat keresni a problémákra.  |
|-------|---|--|
| CRTV2 | The job provides me with significant autonomy in making decisions.                      | Nagyfokú önállósággal rendelkezem a<br>döntések meghozatalában.                              |
| CRTV3 | The job allows me to make<br>decisions about what methods I use<br>to complete my work. | Nagyfokú önállósággal rendelkezem a munkamódszer kiválasztásában.                            |
| CRTV4 | Often, I come up with creative<br>ideas.<br>(I often generate creative ideas.)          | Gyakran támadnak kreatív ötleteim.   |
| CRTV5 | If I believe in an idea, no obstacle<br>will prevent me from making it<br>happen.       | Ha hiszek egy ötletben, egyetlen<br>nehézség sem akadályoz meg abban,<br>hogy megvalósítsam. |

#### Innovativeness (INNV) (16 items)

| INNV1 | Often, I look for ways to improve<br>a process, technology, product,<br>service, or work relationship. | Rendszeresen keresek megoldásokat egy<br>folyamat, technológia, termék,<br>szolgáltatás vagy munkakapcsolat<br>fejlesztésére.             |
|-------|--|---|
| INNV2 | I often recognize opportunities to<br>make a positive difference in work<br>or organization.           | Rendszeresen felismerem azokat a<br>lehetőségeket, amelyekkel pozitív<br>változásokat érhetek el a munkában,<br>illetve a szervezetemben. |
| INNV3 | It is common for me to pay<br>attention to non-routine issues in<br>work.                              | Rendszeresen előfordul, hogy figyelmet<br>fordítok a nem rutinszerű kérdésekre a<br>munkámban.  |
| INNV4 | It is not unusual for me to define<br>problems more broadly to gain<br>greater insight into them.      | Nem szokatlan számomra, hogy<br>bővebben definiálom a problémákat,<br>hogy jobban megismerjem ezek<br>lényegét.                           |
| INNV5 | It's quite often that I'm seeking out<br>new working methods, techniques,<br>or instruments.           | Gyakran keresek új munkamódszereket,<br>technikákat vagy eszközöket.  |
| INNV6 | Experimenting with new work<br>ideas and solutions is often on my<br>agenda.                           | Rendszeresen kisérletezem az új<br>munkaötletekkel és megoldásokkal.  |

| INNV7  | Quite often, I evaluate the strengths and weaknesses of new work ideas.                                 | Gyakran értékelem az új munkaötletek<br>erősségeit és gyengeségeit.   |
|--------|---|---|
| INNV8  | I am quite often attempting to<br>convince people to support an<br>innovative idea.                     | Rendszeresen próbálom meggyőzni a<br>munkatársaimat, hogy támogassanak<br>egy-egy innovatív ötletet.                                |
| INNV9  | Quite often, I push ideas forward so that they can be implemented.                                      | Rendszeresen előreviszem az ötleteket,<br>hogy azok megvalósíthatók legyenek.   |
| INNV10 | Quite often, I take risks in order to support new ideas.  | Rendszeresen vállalok kockázatot az új ötletek támogatása érdekében.  |
| INNV11 | Frequently, I put effort into developing new things.  | Rendszeresen teszek erőfeszítéseket új<br>dolgok megismerésére.   |
| INNV12 | I often contribute to the implementation of novel ideas.  | Rendszeresen hozzájárulok az új ötletek megvalósításához.   |
| INNV13 | Changes that seem beneficial are easily accepted by me.   | Azok a változások, amelyek előnyösnek<br>tűnnek, könnyen elfogadhatók<br>számomra.  |
| INNV14 | Often, I incorporate new ideas for<br>improving an existing process,<br>technology, product or service. | Rendszeresen új ötleteket valósítok meg<br>egy meglévő folyamat, technológia,<br>termék vagy szolgáltatás fejlesztése<br>érdekében. |

# Engagement (ENGM) (5 items)

| ENGM1 | Trying to constantly improve my job<br>performance is very important to me. | Nagyon fontos számomra, hogy<br>folyamatosan javítsam a<br>teljesítményemet. |
|-------|---|--|
| ENGM2 | I find the work that I do full of   | Értelmes, hasznos munkát végzek.   |
|       | meaning and purpose.  |  |
| ENGM3 | Time flies when I am working.   | Munka közben repül az idő.   |
| ENGM4 | My job inspires me.   | A munkám inspirál engem.   |
| ENGM5 | When I get up in the morning, I feel  | Reggel, amikor felkelek, van kedvem  |
|       | like going to work.   | munkába menni.   |

# **9.3** Table 8. Descriptive statistics of items, internal reliability and convergent validity of the first-order constructs

| Code   | Construct/Items  | Mean<br>(SD) | Loadin<br>gs | Cronb<br>ach's α | AVE   | CR    |
|--------|--|--------------|--------------|------------------|-------|-------|
|        | Perceived managerial support   | 3.81 (1.11)  |              | 0.919            | 0.758 | 0.967 |
| MNSP1  | My supervisor provides me with clear expectations of my work responsibilities                              | 3.75 (1.22)  | 0.799        |                  |       |       |
| MNSP2  | My supervisor is supportive when I have a work problem.  | 3.99 (1.21)  | 0.909        |                  |       |       |
| MNSP3  | My supervisor treats my mistakes as a problem to be solved rather than a focus for criticism               | 3.87 (1.26)  | 0.884        |                  |       |       |
| MNSP4  | My supervisor explains the reasoning behind decisions that affect me                                       | 3.60 (1.38)  | 0.902        |                  |       |       |
| MNSP5  | 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 |
| TW1    | My company encourages employee teamwork.   | 3.24 (1.16)  | 0.866        |                  |       |       |
| TW2    | Teamwork is part of the problem-solving process at my company.   | 3.46 (1.19)  | 0.873        |                  |       |       |
| TW3    | I feel I am really a part of the group of people<br>I work with  | 3.68 (1.13)  | 0.698        |                  |       |       |
| TW4    | 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 |
| CLSP1  | In our team, we openly share our thoughts without fear of rejection  | 3.82 (1.07)  | 0.773        |                  |       |       |
| CLSP2  | I can rely upon my coworkers especially when<br>things get tough at work                                   | 3.96 (0.92)  | 0.862        |                  |       |       |
| CLSP3  | My work team is one of the most meaningful social groups to which I belong                                 | 3.25 (1.19)  | 0.735        |                  |       |       |
| CLSP4  | 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 |
| PSR1   | The company provides training to improve the interpersonal skills of employees to build good relationships | 2.78 (1.36)  | 0.699        |                  |       |       |
| PSR2   | Personal relationships in our company<br>encourage a trustful working environment.                         | 3.46 (1.08)  | 0.857        |                  |       |       |
| PSR3   | 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 |
| TRUST1 | There is mutual friendship between employees   | 3.71 (0.94)  | 0.844        |                  |       |       |
|        |  |              |              |                  |       |       |

| TRUST3  | 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 |
| WKS1  | I actively share my professional knowledge with my colleagues                             | 4.34 (0.78) | 0.870  |       |       |       |
| WKS2  | I share my ways to solve problems at the request of other group members                   | 4.50 (0.68) | 0.819  |       |       |       |
| WKS3  | 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 |
| FRNS1   | My organization treats its employees fairly   | 3.16 (1.16) | 0.878  |       |       |       |
| FRNS2   | My organization rewards employees according to their performance                          | 2.74 (1.20) | 0.889  |       |       |       |
| FRNS3   | Employees in my organization are rewarded fairly  | 2.99 (1.34) | 0.852  |       |       |       |
| FRNS4   | 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 |
| SHG1  | In my organization, employees share the same<br>ambitions and vision for the organization | 2.80 (1.12) | 0.891  |       |       |       |
| SHG2  | In my organization, employees<br>enthusiastically pursue collective goals and<br>mission  | 2.97 (1.06) | 0.925  |       |       |       |
| SHG3  | There is a commonality of purpose among employees in this organization                    | 3.06 (1.06) | 0.811  |       |       |       |
| SHG4  | 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 |
| STSF1   | The work I do on my job is meaningful to me   | 4.17 (0.85) | 0.848  |       |       |       |
| STSF2   | I feel I am being paid a fair amount for the work I do*                                   | 3.25 (1.27) | 0.442* |       |       |       |
| STSF3   | When I do a good job, I receive the recognition for it that I should receive*             | 3.36 (1.33) | 0.526* |       |       |       |
| STSF4   | I like doing the things I do at work  | 4.13 (0.87) | 0.849  |       |       |       |
| STSF5   | 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 |
| CRTV1   | I really enjoy a task that involves coming up<br>with new solutions to problems           | 4.46 (0.70) | 0.610  |       |       |       |
| CRTV2   | The job provides me with significant autonomy in making decisions                         | 3.97 (1.00) | 0.818  |       |       |       |
| CRTV3   | The job allows me to make decisions about<br>what methods I use to complete my work       | 4.13 (1.00) | 0.829  |       |       |       |
| CRTV4   | I often generate creative ideas   | 3.86 (0.95) | 0.538  |       |       |       |
| CRTV5   | If I believe in an idea, no obstacle will prevent<br>me from making it happen             | 3.81 (1.05) | 0.730  |       |       |       |
| <b>Opportunity exploration (Innovativeness)</b> |   | 3.73 (0.77) |        | 0.853 | 0.558 | 0.913 |
| Ų.  | Often, I look for ways to improve a process,  | 2           |        |       |       |       |

| INNV2  | I often recognize opportunities to make a positive difference in work or organization                  | 3.72 (0.86) | 0.830  |       |       |       |
|--------|--|-------------|--------|-------|-------|-------|
| INNV3  | It is common for me to pay attention to non-<br>routine issues in work                                 | 3.86 (0.90) | 0.793  |       |       |       |
| INNV5  | It's quite often that I'm seeking out new working methods, techniques, or instruments                  | 3.52 (1.02) | 0.848  |       |       |       |
| INNV11 | Frequently, I put effort into developing new things  | 3.99 (0.96) | 0.654  |       |       |       |
| Id     | lea implementation (Innovativeness)  | 3.43 (0.87) |        | 0.899 | 0.665 | 0.945 |
| INNV6  | Experimenting with new work ideas and solutions is often on my agenda                                  | 3.41 (1.02) | 0.860  |       |       |       |
| INNV7  | Quite often, I evaluate the strengths and weaknesses of new work ideas                                 | 3.39 (1.05) | 0.816  |       |       |       |
| INNV9  | Quite often, I push ideas forward so that they can be implemented                                      | 3.27 (1.05) | 0.830  |       |       |       |
| INNV12 | I often contribute to the implementation of novel ideas  | 3.73 (0.94) | 0.836  |       |       |       |
| INNV14 | Often, I incorporate new ideas for improving<br>an existing process, technology, product or<br>service | 3.34 (1.06) | 0.879  |       |       |       |
|        | Engagement   | 3.92 (0.81) |        | 0.851 | 0.535 | 0.886 |
| ENGM1  | Trying to constantly improve my job<br>performance is very important to me*                            | 4.29 (0.80) | 0.394* |       |       |       |
| ENGM2  | I find the work that I do full of meaning and purpose  | 4.21 (0.88) | 0.838  |       |       |       |
| ENGM3  | Time flies when I am working   | 4.06 (1.01) | 0.870  |       |       |       |
| ENGM4  | My job inspires me   | 3.78 (0.97) | 0.837  |       |       |       |
| ENGM5  | When I get up in the morning, I feel like going to work  | 3.55 (1.03) | 0.757  |       |       |       |

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

Source: own calculations

| Dimension                        | Position of respondent<br>in the company*                         | Sector**   | Size of the<br>organization**  |
|----------------------------------|---|--|--|
| Perceived Managerial<br>support  | Manager or boss<<br>Subordinate employee<br>(Z= -3.738, p<0.001)  | Public <private, non-for-<br="">profit<br/>(H=24.446, p&lt;0.001)</private,> | 10-49 people, 50-249<br>people < 250 or more<br>people < 5-9 people<br>(H=18.997, p<0.001) |
| Teamwork                         | n.s.<br>(Z= -1.594, p=0.111)                                      | Public < Non-for-profit<br><private,<br>(H=45.936, p&lt;0.001)</private,<br> | n.s.<br>(H= 3.419, p=0.331)  |
| Colleagues support               | n.s.<br>(Z= -0.306, p=0.759)                                      | Public < Private, Non-for-<br>profit<br>(H=85.363, p<0.001)                  | 10-49 people< other size<br>groups<br>(H=11.696, p=0.009)                                  |
| Interpersonal relations          | n.s.<br>(Z= -1.090, p=0.276)                                      | Public < Private, Non-for-<br>profit<br>(H=39.125, p<0.001)                  | other size groups < 5-9<br>people<br>(H=9.884, p=0.020)                                    |
| Trust & reciprocity              | n.s.<br>(Z= -1.014, p=0.311)                                      | Public < Non-for-profit,<br>Private<br>(H=24.989, p<0.001)                   | 10-49 people, 250 or more<br>people < 50-249 people, 5-9<br>people<br>(H=24.528, p<0.001)  |
| Willingness to knowledge sharing | Manager or boss><br>Subordinate employee<br>(Z= -8.829, p<0.001)  | Public < Private, Non-for-<br>profit<br>(H=26.062, p<0.001)                  | 10-49 people < 250 or more<br>people, 50-249 people < 5-9<br>people<br>(H=15.831, p=0.001) |
| Justice & fairness               | n.s.<br>(Z= -0.006, p=0.995)                                      | Public < Non-for-profit,<br>Private<br>(H=35.275, p<0.001)                   | 10-49 people, 50-249<br>people, 250 or more people,<br>< 5-9 people<br>(H=14.492, p=0.002) |
| Shared goals                     | n.s.<br>(Z= -0.448 p=0.654)                                       | Public < Non-for-profit ,<br>Private<br>(H=28.469, p<0.001)                  | 10-49 people < 250 or more<br>people, 50-249 people, 5-9<br>people<br>(H=19.443, p<0.001)  |
| Work satisfaction                | n.s.<br>(Z= -0.778, p=0.436)                                      | Public, Private < Non-for-<br>profit<br>(H=23.276, p<0.001)                  | n.s.<br>(H= 0.215, p=0.975)  |
| Work creativity &<br>Autonomy    | Manager or boss ><br>Subordinate employee<br>(Z= -3.299, p=0.001) | Public, Private < Non-for-<br>profit<br>(H=22.564, p<0.001)                  | n.s.<br>(H= 7.393, p=0.060)  |
| Opportunity exploration          | n.s.<br>(Z= -1.394, p=0.163)                                      | Public, Private < Non-for-<br>profit<br>(H=13.974, p=0.001)                  | n.s.<br>(H= 6.000, p=0.112)  |
| Idea implementation              | Manager or boss ><br>Subordinate employee<br>(Z= -4.268, p<0.001) | Public, Private < Non-for-<br>profit<br>(H=14.073, p=0.001)                  | n.s.<br>(H= 2.086, p=0.555)  |
| Engagement                       | Manager or boss ><br>Subordinate employee<br>(Z= -3.675, p<0.001) | Public, Private < Non-for-<br>profit<br>(H=19.764, p<0.001)                  | n.s.<br>(H= 2.480, p=0.479)  |

**9.4 Table 9.** Examining significant differences among groups of respondents based on the mean values of the dimensions

*Note:* n.s.= non significant; \* Mann-Whitney test result; \*\* Kruskal–Wallis test and Dunn–Bonferroni post hoc test results; The significant values are highlighted in gray.

Source: own calculations, n=405

| Dimensions                         | Mean (SD)   | Loadings | Cronbach's α | AVE   | CR    |
|------------------------------------|-------------|----------|--------------|-------|-------|
| Structural OSC                     | 3.53 (0.77) |          | 0.833        | 0.473 | 0.854 |
| 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    |              |       |       |
| <b>Relational OSC</b>              | 3.62 (0.63) |          | 0.654*       | 0.499 | 0.831 |
| 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) |          | _            |       |       |

#### 9.5 Table 10. Second-order constructs

*Note:* \*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 this comparison table as a completely equivalent construct within the research model.

Source: own calculations

|     | Hypothesis/assumption   | Standardized<br>Regression<br>Coefficient<br>(β) | S.E.<br>(Standard<br>error) | р       | Conclusion          |
|-----|---|--|-----------------------------|---------|---------------------|
| H2  | Cognit  | ive OSC $\rightarrow$                            |                             |         | Not supported       |
| H2a | Shared goals $\rightarrow$ Engagement   | 0.076  | 0.039                       | 0.151   | Not supported       |
| Н3  | Relatio   | nal OSC $\rightarrow$                            |                             |         | Partly<br>supported |
| H3a | Relational OSC $\rightarrow$ Willingness to knowledge sharing                 | 0.303  | 0.051                       | < 0.001 | Supported           |
| H3b | Willingness to knowledge sharing<br>→Work autonomy & creativity               | 0.389  | 0.063                       | < 0.001 | Supported           |
| H3c | Willingness to knowledge sharing<br>→ Idea implementation<br>(Innovativeness) | 0.141  | 0.071                       | 0.002   | Supported           |
| H3d | Relational OSC $\rightarrow$ Work satisfaction                                | 0.484  | 0.132                       | 0.001   | Supported           |
| H3e | Relational OSC $\rightarrow$ Work<br>autonomy & creativity                    | 0.321  | 0.139                       | 0.250   | Not supported       |
| H3f | Relational OSC $\rightarrow$ Opportunity<br>exploration (Innovativeness)      | -0.489   | 0.150                       | < 0.001 | Supported           |
| H3g | Relational OSC $\rightarrow$ Idea<br>implementation (Innovativeness)          | -0.142   | 0.133                       | 0.121   | Not supported       |
| H3h | Relational OSC $\rightarrow$ Engagement                                       | 0.058  | 0.080                       | 0.456   | Not supported       |
| H4  | Structural OSC $\rightarrow$  |  |                             |         | Partly<br>supported |
| H4a | Structural OSC $\rightarrow$ Work satisfaction                                | -0.323   | 0.137                       | 0.056   | Not supported       |
| H4b | Structural OSC $\rightarrow$ Work<br>autonomy & creativity                    | -0.476   | 0.170                       | 0.203   | Not supported       |
| H4c | Structural OSC → Opportunity<br>exploration (Innovativeness)                  | 0.651  | 0.153                       | < 0.001 | Supported           |
| H4d | Structural OSC $\rightarrow$ Idea implementation (Innovativeness)             | 0.179  | 0.156                       | 0.127   | Not supported       |
| H4e | Structural OSC $\rightarrow$ Work<br>engagement                               | 0.186  | 0.096                       | 0.071   | Not supported       |
| H5  | $Cognitive OSC \rightarrow Relation{}{}$                                      |  |                             |         | Supported           |
| H5a | Shared goals $\rightarrow$ Relational OSC                                     | 0.651  | 0.053                       | < 0.001 | Supported           |
| H5b | Shared goals $\rightarrow$ Structural OSC                                     | 0.194  | 0.076                       | 0.041   | Supported           |
| H5c | Relational OSC $\rightarrow$ Structural OSC                                   | 0.558  | 0.132                       | < 0.001 | Supported           |
| H5d | Willingness to knowledge sharing<br>→ Structural OSC                          | 0.092  | 0.048                       | 0.025   | Supported           |
| H5e | Structural OSC $\rightarrow$ Relational OSC                                   | 0.244  | 0.081                       | 0.006   | Supported           |
| H6  | The elements of the working env<br>with o                                     | vironment have<br>ne another                     | positive inter              | actions | Supported           |
| H6a | Work satisfaction → Work<br>engagement  | 0.732  | 0.080                       | < 0.001 | Supported           |
| H6b | Work autonomy and creativity →<br>Opportunity exploration<br>(Innovativeness) | 0.877  | 0.278                       | <0.001  | Supported           |

# 9.6 Table 11. Path analysis and hypotheses testing

| Нбс | Work autonomy and creativity →<br>Idea implementation<br>(Innovativeness) | 0.904  | 0.279 | < 0.001 | Supported     |
|-----|---|--------|-------|---------|---------------|
| H6d | Work autonomy and creativity $\rightarrow$<br>Work satisfaction           | 0.387  | 0.158 | < 0.001 | Supported     |
| Нбе | Work satisfaction $\rightarrow$ Opportunity exploration (Innovativeness)  | 0.072  | 0.090 | 0.275   | Not supported |
| H6f | Work satisfaction $\rightarrow$ Idea implementation (Innovativeness)      | -0.080 | 0.119 | 0.266   | Not supported |

Source: own calculations

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