Radmila Miković[1]
Obrad Čabarkapa
Biljana Viduka
Ivana Berić

SOCIAL CAPITAL FEATURES NAVIGATING THE QUALITY OF KNOWLEDGE MANAGEMENT PROCESS IN PROJECT-ORIENTED ORGANIZATIONS

Abstract: The aim of this paper is to examine the relationship between social capital and quality of knowledge management process through the prerequisites embedded in internal and external social links necessary for knowledge to be successfully collected, transferred and used. The methodology applied in this paper is based on a survey conducted among 215 nonprofit organizations from the European Union and the Western Balkans that implement international development projects. The results reveal that project-oriented organizations are more inclined to links that come internally from individuals and teams with similar relational and nodal features while both internal and external structural and cognitive features represent a field that should be further deployed to enhance the quality of knowledge management process. This paper empirically documents the relationship between social capital and quality of knowledge management process in project-oriented organizations, being a very rare study of that kind in the nonprofit industry and generally the social capital and quality of knowledge management research.

Keywords: Social capital, Knowledge management, Quality, Projects, Nonprofit organizations

1. Introduction

Globalized market, fast technological changes and competitiveness put a lot of pressure on organizations to increase knowledge and provide innovative solutions. The question of quality in knowledge management process is gradually taking dominance over other key performing organizational issues. As Chakrabarti et al. (2018) point out in their paper, knowledge management and quality management share the same goal improving performance at all levels of the organization. Given that companies operate in a highly competitive environment, knowledge and its quality are critical to surviving and prospering in these circumstances. Therefore, a high level of knowledge quality helps firms do work better, develop novel and useful products or services, reduce costs, and increase sales. It escalates problem-solving capability, raise process efficiency, and improve performance, the authors conclude.

For nonprofit and non-governmental organizations (NGOs) that implement international development projects the question of the quality of knowledge

---
[1] Corresponding author: Radmila Miković
Email: radmila.mikovic@gmail.com

management is even more challenging. Their donor and project dependency, constant lack of all types of resources and, eventually, the "wicked" nature of development issues they deal with - from disease to urbanization, from conflict to climate change, from economic growth to governance reforms - in essence remain unaddressed and in constant need to adapt and change (Ramalingam et al., 2014). NGOs are squeezed between the need to create interlinked programs while delivering coordinated services and the need to conduct after-action reviews and data collection to improve future efforts. In other words, it is the social capital of NGOs that plays a crucial role in the efficient and sustainable management of developmental knowledge of NGOs (Mikovic et al., 2019b).

Therefore, nonprofit organizations often decide to operate within network cooperation systems, by replacing stiff organizational forms with soft internal networks and complex external alliances and partnerships. Nonprofit industry is based on global partnerships, community-building and collaborations between projects (Kraner, 2014) and has specific knowledge needs regarding communities, project management and organizational practices and resources (Rathi et al., 2016). A collaborative work across organizations as well as with key partners inside and outside the sector enhance sharing experiences and challenges pushing them forward (Mikovic et al., 2020).

The goal of this paper is to examine the relationship between social capital and quality of knowledge management process, that is, to assess the prerequisites embedded in organizational and project internal and external social links (structural, relational, cognitive and nodal patterns that explain the nature of the organizational links) necessary for knowledge to be efficiently and effectively created, shared and used. Given that this paper targets the nonprofit industry, it should, consequently, help the nonprofit and non-governmental organizations become aware of the value that social capital creates for their work and achievement of social

changes, surpassing their size or structure. Similar to the intents of the previous studies (Mikovic et al., 2019a; Mikovic et al., 2019b; Mikovic et al., 2020), this paper will also provide the wider scientific community with an important insight into the social capital in the function of knowledge management but, this time, with focus on the quality of the process, having in mind that this is a rarely analyzed segment in the field, containing the least amount of data important for strategic decision making.

2. Theoretical overview of social capital and quality of knowledge management in the context of project-oriented organizations

The term social capital first appeared in community studies emphasizing the importance of networks of strong personal connections which have developed over time and which represent the essence of trust, cooperation and collective action. Gradually, the concept has been further explored in different contexts from human capital (Coleman, 1988), intellectual capital (Nahapiet & Ghoshal, 1998) to geographic regions (Putnam, 1993), and nations (Fukuyama, 1995). Altough all authors agree that the relation is important for social activity, the consensus has still not been reached on a precise definition of social capital. Putnam, for example, insists on the fact that social relations based on trust, norms and reciprocity are crucial for reaching potential resources embedded in the individuals and networks. On the other hand, Nahapiet & Ghoshal (1998) flag that social capital should be perceived through lens of intellectual capital, seeing social capital as a sum of present and potential resources which are incorporated in the network, available through the network and emerging form the network of relations of individuals or social units. They further explain that the correlation of social capital to intellectual capital and vice versa is the

result of intellectual capital being rooted in social relations and structures of these relations creating thus a value basis of organizational advantage. Namely, correlation of social and intellectual capital enables that social capital decreases transactional expenses economizing on informational and coordination expenses. Also, mutual connection of social and intellectual capital enables creation of resources which are long-lasting, which cannot be traded with, or cannot be repeated like tacit social knowledge, mutual connection or social complexity.

Overall, the most common interpretation of social capital to be found in the literature is related either to links between individuals-social networks and norms, reciprocity and trust generated by them (Putnam, 2000) or a sum of actual and potential resources built into the network, available through the network and generated by the network of links between individuals or social units (Nahapiet & Ghoshal, 1998). Social capital has been systematized through the theory of weak ties (Granovetter, 1973), structural holes (Burt, 1992) and social resources (Lin, Ensel & Vaughn, 1981) and the following dimensions: structural, relational and cognitive (Nahapiet & Ghoshal, 1998). The most important elements of structural dimension are the presence or the absence of network ties between participants (Wasserman & Faust, 1994), network configuration or the morphology that explains the pattern of links measuring its density, connectivity and hierarchy (Tichy, Tushman & Fombrun, 1979), as well as purposefulness that implies that the network created for one purpose can serve another purpose, too (Coleman, 1988). The most important elements of relation dimension are trust (Fukuyama, 1995), norms and sanctions (Putnam, 1993), obligations and expectations (Burt, 1992), id/entity and identification (Hakansson & Snehota, 1995). The most important elements of cognitive dimension are shared knowledge and codification (Cicourel, 1973), narratives

(Orr, 1990), common values, vision and goals (Tsai & Ghoshal, 1998). With the development of the knowledge network concept, scientific community revealed another important dimension of networks, a nodal, and depth of knowledge, capacities to absorb and share knowledge and power based on resources and results, as its key elements (Phelps, Heidl & Wadhwa, 2012).

Similar to social capital, the 1990s saw an increased focus on knowledge management, stressing that knowledge has its own lifecycle and that, therefore, we need to manage it in accordance with the stages it goes through. The research conducted by Bukowitz & Williams (2000), McElroy (1993), Wiig (1993) and Meyer & Zack (1996), recognize the following key stages of knowledge management: creation, accumulation, dissemination and usage/application. In general, knowledge management has been understood as organizational process leveraging knowledge to fulfill organizational objectives. It helps organizations systematically approach, integrate and manage different types of knowledge assets including databases, documents, policies, and procedures, as well as previously unarticulated expertise and experience held by individuals, teams and networks. These are also important dimensions of quality of knowledge management.

Quality of knowledge management has recently received increasing scholarly attention, but the majority of researchers still treat quality management and knowledge management as two entirely separate fields and independent systems of management (Chakrabarti et al., 2018). Quality of knowledge management process refers to accessibility and ease of use (Chen et al., 2012). The former means that one can access and search the related knowledge to meet one's needs anywhere and anytime. The latter means that one can easily input and retrieve the data in the knowledge management system (Kulkarni, 2007). If the quality of knowledge management system is

adequate and meets the employee's needs, the extra effort required to find and use knowledge will be reduced. To ensure that, organizations should secure that their knowledge repositories contain high-quality knowledge, with undergone stringent validation processes. (Durickova & Grey, 2014). However, the extent to which it is possible to use knowledge depends not only on usefulness-accessibility-ease of usage, but how much social or organizational knowledge differs from the knowledge of individuals both within and out of the organization. For generating knowledge, the perspective of social and contextual incorporated form of knowledge and learning is valuably more important than the simple aggregation of knowledge as a group of individuals (Nahapiet & Ghoshal, 1998).

Therefore, the two dimensions of knowledge, explicit/tacit and individual/social, should be more closely examined: individual-explicit, individual-tacit, social-explicit and social-tacit. Individual-explicit refers to conscious knowledge in the form of facts, concepts and frameworks which are stored and taken from the memory of an individual. Individual-tacit refers to automatic knowledge which refers to theoretical and practical knowledge of people like artistic, sports or technical skills. Social-explicit and social-tacit, belong to the corpus of shared knowledge and represent the most advanced form of knowledge which is why today companies have big investments in the development of knowledge and intellect distribution leverage because collective knowledge is considered to be the most important strategic type of organizational knowledge and a factor of its advantage.

The extent to which project-oriented organizations that operate in the nonprofit industry successfully manage knowledge through social resources embedded in their networks, in comparison to other internal processes, is concerning. The projects they manage do provide plenty of possibilities for learning and sharing, but majority lack a system to leverage the combined knowledge of individual employees for the sake of more effective decision making and ultimately competitive positioning. A number of studies discuss challenges of project knowledge management process, most of them related to social aspects. Koskinen (2004) flags insufficient communication and exchange of information and inadequate use of previous experience and lessons learned, Nangoli et al. (2013) social networks in projects, Haas (2006) team capabilities, Williams (2007) the lack of mechanism or motivation for knowledge to be shared in the organization, Hanish et al. (2009) lack of procedures and routines and other appropriate learning mechanisms, etc. A strong relation between knowledge management in project environment and project performances has been confirmed by many studies emphasizing that knowledge and expertise developed within project teams positively influence an organization's long-term success (Ordanini et al., 2008) implicating long-term changes in an organization's strategic focus (Yang et al., 2014), contributing thus to project results and added value for clients (Reich et al., 2012).

3. Methodology

3.1 Research goal

Starting from the presented theoretical framework and limitations of research conducted so far, we have set the following research goal: to examine the relationship between social capital and quality of knowledge management. More specifically, to assess the prerequisites embedded in social links necessary for knowledge to be effectively accessed and used. Given that the research targeted the project-oriented that operate in the nonprofit industry, the research questions were as follows:

1) How organizations perceive their internal and external social capital?
2) How organizations perceive the quality of knowledge management?

3) What are the social capital dimensions and elements of social capital that influence most the quality of knowledge management process?

3.2 Description of sample

The research was conducted in 215 nonprofit and non-governmental organizations (NGOs), in the European Union (EU) and Western Balkans (WB) that implement international and local development projects aimed at improving the quality of life of marginalized groups of people. The surveyed NGOs are both young and mature, large and small organizations, either of pure voluntary and activist nature with loose management structure or with formal organizational structure and defined systems and processes that help them run long term and large-scale international projects and programs.

We used a stratified approach in order to secure that the surveyed population is adequately represented. In regard to the quantity of the sample and its implication on the statistical results, we calculated the strength of study via Power and Sample Size Calculator software package which confirmed appropriateness of the sample size – with estimated number of NGOs in EU and WB around 5000, confidence interval of 4% and confidence level of 95%, ß-.80 (probability of first type of error 0.05 and study strength 0.80), the acceptable number of surveyed organizations would be around 300. With the sample of 215 and keeping the confidence level at 95%, the confidence interval reduced to 6.5%.

3.3 Description of variables

In our research we used three types of variables: sample specific, social capital as input and quality of knowledge management as output variables. Sample specific related to scope of work, location and management structure while input and output related variables were created pursuant to the

findings from the literature (as presented in the Section 2 and listed in detail in Table 1).

3.4 Data collection method

This research is based on a survey. The key instrument used for the survey was a questionnaire containing 45 questions. In order to create the questionnaire, we have first consulted the presently available key theories and definitions of social capital and quality of knowledge management. Based on these findings, we have determined the key dimensions and elements of social capital and quality of knowledge management (variables) and used them to form the questions. The questionnaire is based on the Likert scale (1-5) and was tested by 10 NGOs prior to being presented to the sample in order establish and remove any deficiencies that could compromise the quality of the gathered information.

The survey was done electronically through "SoGoSurvey" allowing access from all electronic devices (computer, laptop, notebook, tablets, cell phone). As far as the statistical processing of data gathered in the survey is concerned, the authors used descriptive statistics (measures of central tendency and percentage). In order to establish the importance of differences between continuous variables, the authors used t-test for independent samples, ANOVA or Mann-Whitney and Kurskal-Wallis test. Chi-squared test was used to establish the importance of differences between categorical variables. In order to establish correlations between the examined variables, the authors used Pearson or Spearman correlation coefficient, while the multivariate logistic regression was used to examine the potential influence of predictor variables on the criterion variable.

The analyses were conducted in PASW, version 20.

4. Results

This research examined 215 representatives of the European Union (EU) and Western Balkans (WB) NGOs working in the fields of culture, media and education (9.3%), environment and health (12.1%), international cooperation and development (20.5%), local development (16.7%), philanthropy and charity (9.8%), social services and sensitive groups (19.1%), civil society and volunteerism (12.6%). Majority of these organizations operate between 10 and 20 years, have a formally defined management structure (81.9%), and most intensive cooperation with the nongovernmental sector.

The EU-based organizations have been operating longer (24 years EU/13 years WB), they have more full-time employees (126 EU/8 WB) and part-time employees (180 EU/21 WB), they boast more approved projects (up to 10 EU/up to 5 WB) and higher annual turnovers (above EUR 200,000 EU/up to EUR 100,000 WB). However, the number of contacts they established with the nongovernmental and business sector is very similar in both territories.

When it comes to the elements of the *external social capital* i.e. the relationships that the surveyed organizations establish with other organizations inside a network (interorganizational relations), the 21-question scale showed a satisfactory level of internal consistency with Cronbach alpha at α=.815, split-half (Spearman-Brown coefficient) reliability at .816 and average correlation of items with overall score at r=.58.

When it comes to the elements of *internal social capital* i.e. the relationships that organizations establish through individuals and teams (interpersonal and intraorganizational relations), the 23-question scale showed a satisfactory level of internal consistency with Cronbach alpha at α=.925, split-half (Spearman-Brown coefficient) reliability at .883 and average correlation of items with overall score at r=.59. Out of 23 questions only 3 related specifically to teams (R3b-trust, R5-exchange of resources, R7b-obligations and expectations). Namely, the same individuals are often a part of different teams or, it may happen that certain individuals represent an entire team by performing several functions at the same time.

All results relating to teams are identical to the results relating to individuals, which proves that these two levels are hard to differentiate. Therefore, later analyses merge interpersonal and intraorganizational levels into a single *intraorganizational* level that encompasses all relations within an organization established through individuals and teams.

When it comes to the key segments of *quality of knowledge management* the single question scale showed a satisfactory level of internal consistency with Cronbach alpha at α=.916, split-half (Spearman-Brown coefficient) reliability at .842 and average correlation of items with overall score at r=.61.

The NGOs evaluated their internal/external social capital and quality of knowledge management as specified in the Table 1.

Correlation analysis confirmed a relationship between social capital and quality of knowledge management, as presented in Table 2.

The hierarchical regression analysis additionally detected strong correlations between predictor (social capital) and criterion (quality of knowledge management) variables.

As shown in Table 3, only relational and nodus dimensions of the internal social capital, and relation dimension of the external social capital showed contribution to the model.

Table 1. Descriptive data for inter/intra social capital and quality of knowledge management

Social capital dimensions and elements/external	Mean	Std. Dev.	Skewness	Kurtosis	Kolm-Smir.
R6 Norms (and respect of norms)	4.46	0.594	-0.725	0.310	0.325*
R4 Respect	4.43	0.607	-0.689	0.202	0.314*
R5 Reciprocity	4.24	0.766	-0.884	0.575	0.298*
S1 Number of ties (network openness)	4.24	0.890	-1.460	2.452	0.258*
S2 Number of direct ties (network closeness)	4.20	0.696	-1.291	4.151	0.310*
R1b Strength of ties (duration)	4.20	0.736	-1.463	4.469	0.312*
R3 Trust	4.13	0.657	-0.542	0.867	0.309*
N3 Capacity to absorb and transfer knowledge	3.99	0.730	-0.568	0.891	0.296*
N2b Power (results)	3.94	0.780	-0.908	1.605	0.326*
K1 Common vision and goals	3.83	0.809	-0.488	0.211	0.284*
N2a Power (resources)	3.83	0.898	-1.294	2.181	0.353*
K3 Common values	3.82	0.688	-0.364	0.284	0.327*
R1a Strength of ties (intensity)	3.74	0.830	-0.866	0.761	0.349*
N4 Depth of knowledge	3.74	0.890	-0.628	0.487	0.326*
R7 Obligations and expectations	3.68	0.908	-0.464	-0.184	0.269*
K5 Common narrative	3.60	0.790	-0.649	0.775	0.303*
S4 Network position (central)	3.57	0.929	-0.425	-0.418	0.277*
N1 Diversity of network contacts	3.55	0.734	-0.493	0.651	0.293*
N2c Power (influence)	3.47	1.049	-0.557	-0.408	0.281*
R2 Closeness of actors	3.45	1.017	-0.566	-0.247	0.233
S5 Structural equivalency	3.22	0.955	-0.266	-0.555	0.229
Social capital dimensions and elements/internal	Mean	Std. Dev.	Skewness	Kurtosis	Kolm-Smir.
R5a Reciprocity (individuals)	4.41	0.670	-1.091	1.508	0.307*
R3a Trust (towards individuals)	4.38	0.706	-1.259	2.595	0.293*
R4 Respect (mutual)	4.38	0.685	-0.910	0.677	0.298*
R3c Trust (towards organization)	4.34	0.671	-0.711	0.221	0.280*
K3 Common values	4.31	0.809	-1.375	2.404	0.277*
R5b Reciprocity (teams)	4.31	0.676	-0.829	0.999	0.266*
R3b Trust (towards teams)	4.27	0.726	-.694	-0.023	0.264*
R1a Strength of ties (intensity)	4.20	0.831	-1.317	2.227	0.291*
S2 Number of direct ties (closeness)	4.18	0.676	-0.877	2.356	0.299*
S1 Number of ties (openness)	4.17	0.719	-0.574	0.166	0.257*
K1 Common vision and goals	4.13	0.783	-0.714	0.541	0.246*
N3 Capacity to absorb and transfer knowledge	4.11	0.744	-0.587	0.196	0.271*
N2b Power (results)	4.08	0.796	-1.152	2.446	0.307*
R6a Norms (and respect of norms)	4.07	0.713	-0.968	2.693	0.314*
R1b Strength of ties (duration)	4.01	0.925	-0.708	-0.298	0.252*
N2a Power (resources)	3.97	0.773	-0.749	0.987	0.310*
R7a Obligations and expectations (individuals)	3.90	0.862	-0.739	0.553	0.289*
R7b Obligations and expectations (teams)	3.89	0.828	-0.847	1.010	0.319*
N4 Depth of knowledge	3.87	0.727	-0.672	1.140	0.332*
K5 Common narrative	3.87	0.812	-0.594	0.110	0.310*
N2c Power (influence)	3.81	0.855	-0.718	0.516	0.307*
R2 Closeness of employees	3.68	0.943	-0.643	0.370	0.259*
R6b Sanctions	3.08	1.135	0.211	-0.905	0.192
Quality of knowledge management	Mean	Std. Dev.	Skewness	Kurtosis	Kolm-Smir.
QZ Usefulness, accessibility and ease of use of knowledge	4,22	,679	-1.023	2.821	,296*

**<.01; *<.05

Table 2. Level of correlation of inter/intra social capital and quality of knowledge management

Social capital dimensions/internal		*Quality of knowledge management*
Structural dimension	Pearson Correlation	**,366**[**]
	Sig. (2-tailed)	,000
Relational dimension	Pearson Correlation	**,630**[**]
	Sig. (2-tailed)	,000
Cognitive dimension	Pearson Correlation	**,546**[**]
	Sig. (2-tailed)	,000
Nodal dimension	Pearson Correlation	**,574**[**]
	Sig. (2-tailed)	,000

Social capital dimensions/external		*Quality of knowledge management*
Structural dimension	Pearson Correlation	,109
	Sig. (2-tailed)	,113
Relational dimension	Pearson Correlation	**,441**[**]
	Sig. (2-tailed)	,000
Cognitive dimension	Pearson Correlation	,260[**]
	Sig. (2-tailed)	,000
Nodal dimension	Pearson Correlation	**,365**[**]
	Sig. (2-tailed)	,000

**<.01; *<.05

Table 3. Level of influence of inter/intra social capital and quality of knowledge management

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,670	,2,84		2.357	,019
	Intrarelational dimension	,044	,007	,449	6.023	,000
	Intranodus dimension	,061	,018	,253	3.392	,001
	Intracognitive dimension	,051	,027	,144	1.865	,064
2	**(Constant)**	,162	,353		,460	,646
	Intrarelational dimension	,037	,008	,375	4.692	,000
	Intranodus dimension	,060	,018	,248	3.371	,001
	Interrelational dimension	,028	,012	,145	2.382	,018
3	(Constant)	,122	,358		,341	,733
	Intrarelational dimension	,037	,008	,375	4.683	,000
	Intranodus dimension	,058	,018	,238	3.168	,002
	Interrelational dimension	,024	,013	,124	1.840	,067
	Internodus dimension	,010	,014	,045	,710	,478
a. Dependent Variable: **Quality of knowledge management**						

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,654[a]	,427	,422	,516
2	,655[b]	,442	,434	,511

a.Predictors: (Constant), Intrarelatioal dimension, Intranodus dimension

b. Predictors: (Constant), Intrarelational dimension, Intranodus dimension, Interrelational dimension

As shown in the Figure 1, this model predicts **43,4%** of variance in the criterion variable. The elements of social capital that contribute most to the quality of knowledge management process are capacity to absorb and transfer knowledge, power based on results and resources, depth of knowledge, trust, strength of ties, respect and reciprocity of internal social capital as well as norms, obligations and expectations of external social capital.
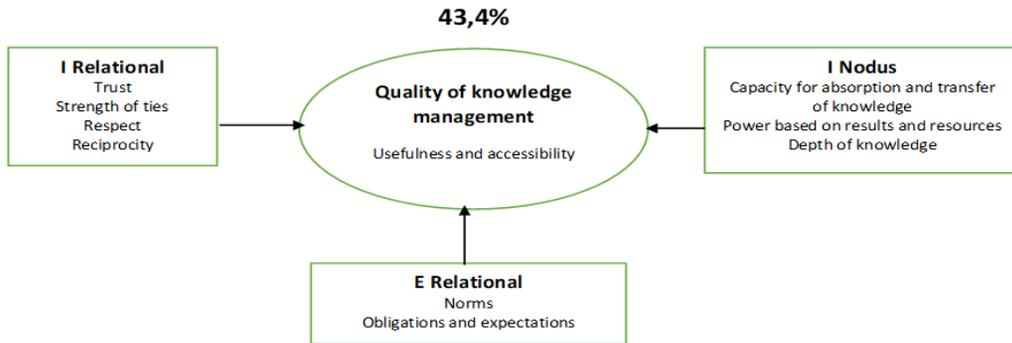

Figure 1. Model of quality of knowledge managemant process based on social capital

5. Discussion

The results revealed information important for the interpretation of findings related to the research questions, as well as for making conclusions and recommendations relevant for further similar studies.

We found that NGOs *external and internal social capital* is characterized by versatile type and nature of external and internal ties. While external social capital is rich with open and closed ties with different actors, its internal social capital hardly differentiates ties between individuals and ties between teams because the same individuals are often a part of different teams or perform several functions at the same time. NGOs prefer network cooperation that is characterized by precisely defined responsibilities, mutual goals to achieve, values that tie them together, opportunities for exchanging information and knowledge, as well as to use the resources they lack and, most of all, to be a part of the system that is making a change and whose effects clearly influence the quality of lives of people they work with and for.

Internally, the reciprocity between individuals and teams, trust towards individuals and teams, mutual respect and values, as well as the strength of ties relating to the intensity of communication seem particularly important.

Similar to their perception of organizational social capital, NGOs rank the *quality of knowledge management* very high. NGOs believe that they access and use knowledge with ease and that the knowledge they possess is useful. However, some of the previous researches revealed somewhat different reality. NGOs lack standardized approach to tools and procedures that would allow systematized gathering, storing and absorbing (exploitation, transformation, exploration) of knowledge. Using network contacts to boost knowledge usage is still not regarded as a key advantage; network cooperation is usually project-based (and most often prompted by donors), aimed at providing an easier access to end users and resources necessary for successful project implementation. Consequently, the full network potential in the context of strategically planned knowledge creation, institutionalization and usage is not

sufficiently recognized (Mikovic et al., 2019a).

The project knowledge NGOs acquire from their social interactions is powerful. As already mentioned in the introduction, the NGO sector is based on global partnerships, community building and project collaborations (Kraner, 2014) and has specific knowledge needs regarding communities, project management and organizational practices and resources, both in terms of sector and context (Rathi et al., 2016). Yet, NGOs are rather pushed to learn about these phenomena drawing the analogy from profit-based organizations which is inappropriate given that profit and nonprofit structures operate under different values, missions, goals and contexts. Therefore, there is still a lot of work ahead on understanding and integrating the social capital concept in the knowledge management process and reaching its highest quality. If project knowledge is to be effectively managed, there is a need to develop knowledge interventions based on the social processes, practices and patterns within the organization (Brookes et al., 2006). As recommended by Huang & Newell (2003) and Cummings (2004), NGOs as project-based organizations, that operate in complex international development contexts, should learn from their own examples and their own sector about the role that social processes, practices and patterns (social capital and social networks) have for effective management of project knowledge.

The model we propose in this paper considers accessibility and ease of use of knowledge (Chakrabarti et al., 2018) along with usefulness of knowledge repositorium (Durickova & Grey, 2014) as important indicators of the quality of knowledge management process. This model integrates the elements of social capital that would significantly contribute to project-based organizations operating in the nonprofit industry and the better quality of knowledge management process. If NGOs would think more strategically about their relations and

power coming from the shared knowledge, this would boost knowledge innovation and usage and therefore back up organizational learning both internally and externally, so much important for development of organizations with limited resources, project dependent, such as the ones operating in the nonprofit industry. NGOs belong to the group of project-oriented organizations that operate in highly dynamic and unstable international environments with limited resources and vast demand. Therefore, they must look for fast and sustainable solutions in relationships inside and outside of their organizations in order to be able to use the accumulated, innovated or distributed knowledge necessary for implementing their projects (Arokiasamy, 2021).

Relying both on tacit and explicit knowledge, in a bigger or smaller amount, rooted in internal and external sources, NGOs get a chance to create a new, more energetic environment. Such knowledge dissemination contains the information, skills and competences necessary for achieving an advantageous position on the market (Nahapiet & Ghoshal, 1998). The model we propose confirms the above said. NGOs are strongly encouraged to operate within network cooperation systems, by replacing stiff organizational forms with soft internal networks, thus bonding the people and bridging the distance between organizations with complex external networks based on alliances and partnerships.

6. Conclusion

This paper examined the relationship between social capital and quality of knowledge management process of project-oriented organizations through links established inside and outside of their boundaries. Being specifically focused on nonprofit industry, it has been established that nonprofit organizations, due to their projects and networks, have a rich social capital, but that its potential has not been

sufficiently acknowledged, especially not in regard to the quality of knowledge management. Correlation between social capital and quality of knowledge management does exist, both on interorganizational and intraorganizational level, but with obvious superiority of internal and external relational and internal nodal dimensions and elements of social capital over its structural and cognitive dimensions and elements. The model proposed considers accessibility and ease of use of knowledge, and usefuelness of knowledge repositorium as important indicators of knowledge management. If nonprofit organizations would rely more on the social capital features steming from their projects, this would help them reach the more appropriate solutions for people in need. It would stimulate knowledge innovation, share and usage and therefore back up organizational learning both internally and externally, much important for development of organizations with limited resources.

Nevertheless, we have to stress that this research has certain limitations. Firstly, we examined a specific type of the nonprofit industry, project-oriented NGOs whose characteristics are different from other nonprofit organizations that pertain to the public sector and operate under different missions, values and goals.

Secondly, the territory covered by this research refers to Europe so the results of this survey are just of implicit value to nonprofit sector in general and worldwide. Finally, this research is the very first study that examines the relationship between social capital and quality of knowledge management process in the nonprofit industry so the findings can be just partly compared to findings of similar available studies from other industries. Given what has been said, it would be useful to conduct more similar studies in other types of nonprofit industry and across different geographic regions.

This would provide a solid basis for more explicit evidence on the influence of organizational internal and external social capital on the quality of knowledge management process of project-oriented organizations operating in the nonprofit industry.

It would, also, create a much-needed portfolio of scientific data necessary for the literature of social capital, knowledge management, project management and total quality management.

References:

Arokiasamy, A. R., Ross Smith, P. M., Krishnaswamy, J., & Kijbumrung, T. (2021). Knowledge management and firm innovativeness: The mediating role of innovative culture on mnes in malaysia. *Proceedings on Engineering Sciences*, *3*(3), 319–334. https://doi.org/10.24874/PES03.03.008

Bukowitz, W., & Williams, R. (2000). *The knowledge management Field book*. London: Prentice Hall.

Burt, R. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Chen, S. S., Chuang Y. W., & Chen, P. Y. (2012). Behavioural intention formation in knowledge sharing: examining the roles of KMS quality, KMS self-efficacy, and organizational climate, *Knowledge-Based Systems*, *31*,106-118.

Chakrabarti, D., Sharma, P., & Arora, M. (2018). Evaluating knowledge quality in knowledge management systems. *Journal of Statistics Applications and Probability*, *7*(1), 75-84.

Cicourel, A. (1973). *Cognitive Sociology.* Harmondsworth, England: Penguin Books.

Coleman, J. (1988). Social capital in the creation of human capital. *The American Journal of Sociology, 94*, S95-S120.

Cummings, N. (2004). Work groups, structural diversity and knowledge sharing in a global organization. *Management Science*, *50*(3), 352–65.

Durcikova, A., & Gray, P. (2014). How knowledge validation affects knowledge contribution, *Journal of Management Information Systems*, *25*(4), 81-107.

Fukuyama, F. (1995). *Trust: Social Virtues and the Creation of Prosperity.* London: Adamantine Press.

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology (6)*, 1360-1380.

Hakansson, H., & Snehota, I. (1995). *Developing Relationships in Business Networks.* London: Routledge.

Haas, M. R. (2006). Knowledge gathering, team capabilities, and project performance in challenging work environments. *Management Science, 52*(8), 1170-1184.

Hanisch, B., Lindner, F., Mueller, A. & Wald, A. (2009). Knowledge management in project environments. *Journal of Knowledge Management, 13*(4), 148-160.

Huang, J., & Newell, S. (2003). Knowledge integration processes and dynamics within the context of cross-functional projects. *International Journal of Project Management*, *2*, 167–76.

Kraner, M. A. (2014). *Friends or Foes? Examining Social Capital of International NGOs and Food Security Programs. Public Affairs and Policy Department.* Portland State University, Dissertations and Theses Paper, *1647*, 2014.

Koskinen, K. (2004). Knowledge management to improve project communication and implementation. *Project Management Journal, 35*(1), 13-19

Kulkarni, U., Ravindran, S. & Freeze, R. (2007). A knowledge management success model: theoretical development and empirical validation. *Journal of Management Information Systems*, *23*(3), 309-347.

Lin, N., Ensel, W., & Vaughn, J. (1981). Social resources and strength of ties. *American Sociological Review, 46*, 1163-1181.

McElroy, M. W. (2003). *The new knowledge management: complexity, learning, and sustainable innovation.* KMCI Press.

Meyer, M., & Zack, M. (1996). The design and implementation of information products. *Sloan Management Review*, *37*(3), 43-59.

Mikovic, R., Petrovic, D., Mihic, M., Obradovic, V., & Todorovic, M. (2020). Integration of social capital and knowledge management – the key challenge for international development and cooperation projects of nonprofit organizations, *International Project Management Journal*, *38*(8), 515-533.

Mikovic, R., Petrovic, D., Mihic, M., Obradovic, V., & Todorovic, M. (2019a). Examining the relationship between social capital and knowledge ssage in the nonprofit industry. *Knowledge Management Research and Practice*, *17*(3), 328-339.

Mikovic, R., Arsic, B., Gligorijevic, Dj., Gacic, M., Petrovic, D., & Filipovic, N. (2019b). The influence of social capital on knowledge management maturity of nonprofit organizations - Predictive Modelling based on a Multilevel Analysis. *IEEE Access*, *7*(1), 47929-47943.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital and the organizational advantage. *Academy of Management Review, 23*(2), 242-268.

Nangoli, S., Namagembe, S., Ahimbisibwe, A., & Bashir, H. (2013). The antecedent role of social networks in project communication. *International Journal of Economics and Management Sciences, 2*(8), 25-32.

Ordanini, A., Rubera, G., & Sala, M. (2008). Integrating functional knowledge and embedding learning in new product launches: how project forms helped EMI Music. *Long Range Planning, 41*(1), 17-32.

Orr, J. (1990). Sharing Knowledge, Celebrating Identity: Community Memory in a Service Culture. In D. Middleton, and D. Edwards, *Collective Remembering* (pp. 169-189). London: Sage

Phelps, C., Heidl, R., & Wadhwa, A. (2012). Knowledge, networks and knowledge networks: a review and research agenda. *Journal of Management, 38*(4), 1115-1166.

Putnam, R. (1993). The prosperous community: social capital and public life. *American Prospect, 13*, 35-42.

Putman, R. (2000). *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon and Schuster.

Rathi, D., & Given, L. M. (2017). Non-profit organizations' use of tools and technologies for knowledge management: a comparative study. *Journal of Knowledge Management*, 21(4), 718-740.

Reich, H., Gemino, A., & Sauer, C. (2012). Knowledge management and project-based knowledge in it projects: A model and preliminary empirical results. *International Journal of Project Management, 30*, 663-674.

Tichy, N., Tushman, M., & Fombrun, C. (1979). Social network analysis for organizations. *Academy of Management Review*, *4*(4), 507-519.

Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: the role of intrafirm networks. *Academy of Management Journal, 41*, 464-476.

Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications.* Cambridge, England: Cambridge University Press.West, M., & Anderson, N. (1996). Innovation in Top Management Teams. *Journal of Applied Psychology, 81*, 680-693.

Wiig, K. (1993). *Knowledge Management Foundations*. Arlington, TX: Schema Press.

Williams, C. (2007). Transfer in context: replication and adaptation in knowledge transfer relationships. *Strategic Management Journal, 28*, 867-889.

Yang, L. R., Huang, C.-F., & Hsu, T. J. (2014). Knowledge leadership to improve project and organizational performance. *International Journal of Project Management, 32*(1), 40-53.

Radmila Miković,
Faculty of Project and Innovation
Management, University of
Educons, Serbia,
radmila.mikovic@gmail.com
ORCID 0000-0002-8664-491X

Obrad Čabarkapa,
Faculty of Project and Innovation
Management, University of
Educons, Serbia,
obrad.cabarkapa@gmail.com
ORCID 0000-0002-3949-8227

Biljana Viduka,
Faculty of Project and
Innovation Management,
University of Educons, Serbia,
biljaviduka@gmail.com
ORCID 0000-0002-7044-9976

Ivana Berić,
Faculty of Project and Innovation
Management, University of
Educons,
Serbia,
ivana.beric26@gmail.com
ORCID 0000-0001-7749-8335