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The integration of social capital and knowledge management – The key challenge for international development and cooperation projects of nonprofit organizations

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ABSTRACT

Nonprofit, nongovernmental organizations (NGOs) are important actors in international development (ID) who implement trillions of dollars' worth of projects annually. As with other organizations delivering projects, ID NGOs seem to be failing many stakeholders due to poor delivery of results. Lack, and mismanagement, of social links and knowledge resources have been identified as the biggest challenges of ID NGOs in reaching vulnerable beneficiary populations. We have explored ID NGOs' social capital and knowledge management systems in order to propose an integrated model to optimize ID NGO project management through social resources embedded into organizational structures. The integrated model we propose enables multi-stakeholder engagement in all phases of project life cycle, building a culture of accountability and respect. This model also helps promote smart and flexible solutions to the "wicked" problems ID projects often grapple with, as well as timely adaptation to changed circumstances and unforeseen or challenging events.

1. Introduction

International development (ID) is now a data-, information-, and knowledge-intensive industry, which some have characterized as "development 2.0." (Kelly, 2018). The industry is also the eighth largest economy in the world, and nongovernmental civil society-based organizations (NGOs) as key actors of international development are worth more than $1 trillion a year globally, with over 19 million paid workers, countless volunteers and the authority to manage ID projects worth billions of US dollars annually (Root Change, 2018). Evidently, ID projects dealing with global challenges offer a potent source of learning for conventional projects (Ika & Hodgson, 2014), especially for learning from failure – as it is estimated by some that 64% of ID projects fail to produce much needed intended impact for beneficiaries (Lovegrove, Gebre, Lee & Kumar, 2011). Addressing a number of growing insecurities, ID projects' achievements can look rather grim and disappointing to policy makers, while ID NGO efforts as palliative rather than transformative (Banks, Hulme & Edwards, 2015). Mismanagement, challenging socio-economic-political context and the complexity of projects' and programs' strategies are identified as key bottlenecks influencing fragmentation, lack of coordination, and reduced benefits of ID projects to recipients (Addison, Niño-Zarazúa & Finn Tarp, 2015). Also, ID NGOs' limited resources, and reliance on donors with multiple implementation and reporting requirements, can result in a double-client system, where ID NGOs need to satisfy a client donor while respecting local populations whose needs are not always compatible with donors' vision (Briere, Proulx, Navaro-Flores & Laporte, 2015) In this regard, ID projects are not necessarily unique, but rather represent extreme cases of the problems that are common to conventional projects, whether they are private or public sector, national or international projects (Ika, 2012).

In our paper, we analyze ID NGOs located in the EU and the WB with average of 10 to 20 years of experience in international development and cooperation, local development, culture, media and education, environment and wellness, philanthropy and humanitarian aid, social services, civil society and voluntarism. More specifically, we analyze ID NGOs that are involved in large-scale EU projects (over 1 mil EUR) and in some cases have hundreds of employees both locally and internationally, as well as ID NGOs involved in WB projects that are in most cases small-scale (up to 100 000 EUR) and that are highly reliant on their members and volunteers and have only a small number of full-time paid staff. In our paper, we focus on mismanagement practices of ID NGOs, that is, lack of know-how to use their social capital to better manage their project knowledge and thus address the challenges they face, both inter-

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nally (performance related, under their control) and externally (relating to context and factors not under their control) when implementing their projects. ID NGOs are not efficient in using their traditional strengths as intermediaries to build bridges between grassroots organizations and local and national levels, and to apply their knowledge of local contexts in an increasingly interconnected world (Banks et al., 2015). Surveys by ALNAP (Active Learning Network for Accountability and Performance) conducted in 2012 and 2015 with 631 ID NGO leaders from 183 organizations revealed that inadequate social relations with local actors, the lack of the right balance between networking and fund-raising efforts, and insufficient input from affected populations during project design were the largest obstacles to delivering aid effectively. Given that project performance is significantly associated with the particular structure of a project's social capital (Di (Di Vicenzo & Mascia, 2012)), in order to develop collaborative responses ID NGOs must communicate and establish multi stakeholder and cross sector partnerships, both official and unofficial. Without such collaboration, the "NGO swarm" is inevitable and the organization's mission is in danger (Cooley & James, 2002).

Only a handful of academic studies have focused on the social capital of, and benefits of social interactions to, NGOs operating in the ID sector. This is puzzling, as the ID NGO sector 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, Given & Forcier, 2016). ID NGOs struggle to learn about these because they try to do so using models from profit-based organizations which are inappropriate given that profit and nonprofit structures operate with different values, missions, goals and contexts. 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, Morton, Dainty & Burns, 2006). If ID NGOs seek a more mature project knowledge management, there is a need for more efficient use of social capital both within and outside the organization (Mikovic et al., 2019b). To that end 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 in effective management of project knowledge (Cummings, 2004; Huang & Newell, 2003).

In light of the above, and having already confirmed the usefulness of social capital for knowledge management processes in previous research (Mikovic, 2019; Mikovic, Petrovic, Mihic, Obradovic, Todorovic, 2019a, 2019b), **the main purpose of this paper** is to explore the social capital and knowledge management of NGOs as non-profit and project-based organizations that operate in complex international and local development contexts, as well as to search for a model to optimize their integration for the purpose of more effective project management. More specifically, we would like to answer the following **research questions**:

1 What social capital elements are the key drivers of knowledge management in ID NGOs?
2 How can the project knowledge management model facilitate the integration of social capital and knowledge management in ID NGOs?
3 How can the integrated model we propose contribute to more efficient project management of ID NGOs, project-based organizations that operate in ID sector, and project management in general?

In order to provide answers to our research questions, we have structured our work as follows: In Section 2 we give a brief overview of the key theoretical findings from the literature we used to conceptualize our research framework. In Section 3 we provide information about the sample, data collection and analysis methods, describing in detail the input and output variables as well as how these have been determined and operationalized. In Section 4 we discuss the results achieved, answering the research questions. Finally, we conclude our study and discuss drawbacks of the current approach and provide suggestions for future work in Sections 5 and 6.

2. Theoretical overview of social capital, knowledge management, project knowledge management and their link to project management in ID NGOs

Knowledge and learning are at the heart of international development practice. Development impact is no longer measured solely by economic indicators as a measure of welfare, but is increasingly related to people's ability to access, generate, and leverage specialized knowledge (Ferguson, Huysman & Soekijad, 2010). These factors together characterize the international development sector as knowledge-intensive (Powell, 2006). From a knowledge-oriented point of view, organizations in a development context embrace knowledge management and learning practices to strengthen their own, as well as their constituents' (access to) knowledge. They do this in order to enhance their influence on development-related decision-making processes, and ultimately strengthen the self-sufficiency of beneficiaries' human and social capital. After all, human and social capital are important determinants of people's capacity to respond to the challenges in their environment (Laszlo & Laszlo, 2002) and to participate more actively in decision-making processes that affect them (Stiglitz, 2002). Therefore, if development organizations need to leverage their stakeholders' knowledge to influence decision-makers, effective development requires improved understanding among development professionals of the local situations they aim to change (Powell, 2006) on the one hand, and integration of this knowledge into development interventions (projects). On the other hand, development effectiveness depends on the ability among development actors to use knowledge that flows within many formal and informal, local and global social networks active within the development sector and access decision makers in relevant policy domains (Haas, 1990). In conclusion, it is the internal and external social capital of organizations that give them the knowledge needed for the resolution of the development issues that ID NGOs address through their projects.

2.1. Social capital

The term social capital was first used 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 in such communities (Jacobs, 1965). The key premise of the social capital concept is that networks are a valuable resource, bringing mutual recognition and long-term obligation as a result of feelings of gratitude, respect, friendship or institutionally guaranteed rights, to members of a family, class or school (Bourdieu, 1986). Given that our paper considers internal and external social capital of the organization and knowledge management as a key precondition for efficient project management of ID NGOs, we adhere to the definition of social capital as 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).

In our paper, as in previous studies (Mikovic, 2019; Mikovic et al., 2019a, 2019b), we analyze structural, relational, cognitive (Nahapiet & Ghoshal, 1998) and nodal (Phelps, Heidl & Wadhwa, 2012) dimensions and elements of social capital within two types of social units, one from the perspective of links created within, between individuals and teams in an organization (intraorganizational level of analysis), and the other from the perspective of links created between organizations within a network (interorganizational level of analysis). *Structural dimension* explains the general pattern of relations between participants, i.e. who you reach and in which way you reach them (Burt, 1992), the presence or the absence of network ties between participants (Wasserman & Faust, 1994), that is open ties (Burt, 2004) and closed ties (Singh, 2005), network position (Burt, 2004) and structural equivalence (Walker, 1985). *Relational dimension* describes the nature of the relations developed through human interactions over time (Granovetter, 1992), that is intensive and long-term communication (Marsden & Campbell, 1984), trust (Fukuyama, 1995), closeness

(Hansen & Løvås, 2004; Sampson, 2007; Simonin, 1999), reciprocity, norms and sanctions (Putnam, 1993) and obligations and expectations (Burt, 1992). *Cognitive dimension*, refers to resources providing shared representations, interpretations, and systems of meaning among network members (Cicourel, 1973), that is shared narratives (Orr, 1990), common values, vision and goals (Tsai & Ghoshal, 1998). *Nodal dimension* describes the characteristics of nodes, which may be individuals or collectives, and both recipients and sources of information and knowledge (Phelps et al., 2012) characterized by the diversity of network contacts (Perry-Smith, 2006), power (Rothaermel & Hess, 2007), the capacity to receive and transfer knowledge (Rothaermel & Alexandre, 2009), and the depth of knowledge (Tallman & Phene, 2007).

2.2. Knowledge management

Knowledge is a valuable, rare, and nonsubstitutable resource that gives an organization a sustainable competitive advantage (Teece, 1998). For decades now, organizations have proactively engaged in knowledge management hoping to improve performance through better management of what they know. Although knowledge management theories are either people-oriented or technology-oriented, overall, in the broadest sense, knowledge management is defined as the ability to leverage knowledge for achieving organizational goals (Rubenstein-Montano, Buchwalter & Liebowitz, 2001). On the other hand, although many organizations worldwide are introducing knowledge management practices, there is no generally acknowledged methodology for assessing where the organization stands, compared to its competitors (Rašula, Bosilj Vukšić & Indihar-Štemberger, 2008).

In our paper, as in previous studies (Mikovic, 2019; Mikovic et al., 2019a, 2019b), we analyze knowledge management with the assumption that knowledge has its own lifecycle and that, therefore, we need to manage it in accordance with the stages of this cycle. The research conducted by Bukowitz and Williams (2000), McElroy (2003), Wiig (1993) and Meyer and Zack (1996), systematize the following key stages and elements of knowledge management: *creation* (or innovation); *acquisition* (or collection, transformation and accumulation of tacit into explicit knowledge); *dissemination* (or transfer of explicit knowledge and sharing of tacit knowledge); and *usage* (or application, use of knowledge management tools, standardization of knowledge, storage of data and prevention of data loss, simplicity of knowledge usage). The extent to which an organization consistently manages the above stages and effectively uses its knowledge is defined as 'knowledge management maturity' (Kulkarni & Louis, 2003). Knowledge, organization and information technology are seen as key prerequisites that influence an organization's knowledge management maturity (Rašula, Bosilj Vukšić & Indihar-Štemberger, 2008). In other words, the level of knowledge management maturity describes the position of an organization when it comes to its knowledge management and what it can improve in order to be competitive in the market (Ahn & Chang, 2004).

2.3. Project knowledge management

Project knowledge management has become an increasingly common topic of studies in the project management field. But research papers are mainly related to specific project types or industries and the nonprofit sector is still under-researched. In our research we are particularly focused on the main challenges related to gathering information during a project, learning and knowledge transfer in a project and the influence of project knowledge management on project and organizational performance. We came across a number of studies discussing the challenges of the project knowledge management process, most of them related to social aspects. These included insufficient communication and exchange of information and inadequate use of previous experience and lessons learned (Huang & Newell, 2003; Koskinen, 2004); social networks in projects (Nangoli, Namagembe, Ahimbisibwe & Bashir, 2013); team capabilities (Haas, 2006); limited mechanisms or motivations for knowledge to be shared in the organization (Williams, 2007), and lack of procedures and routines and other appropriate learning mechanisms (Hanisch, Lindner, Mueller & Wald, 2009). While several groups of authors confirmed a strong relationship between knowledge management in the project environment and project performance (Kotnour, 2000; Lee & Choi, 2003; Quigley, Tesluk, Locke & Bartol, 2007; Todorovic et al., 2015), other researches confirmed an even wider impact of project knowledge management, suggesting that the mix of knowledge and expertise developed within project teams positively influence an organization's long-term success (Ordanini, Rubera & Sala, 2008), can bring long-term changes in an organization's strategic focus (Brady & Davies, 2004; Yang, Huang & Hsu, 2014) and, contribute to project results and added value for clients (Reich, Gemino & Sauer, 2012).

2.4. Social capital, knowledge management and project knowledge management as success factors of ID NGOs project management

The nonprofit sector is one of the least explored sectors and little research can be found on how NGOs approach project management for international development (ID) projects (Golini & Landoni, 2014). Golini and Landoni (2014) argue that the involvement of different cultures and stakeholders and the absence of easily verifiable objectives pose substantial challenges to the correct management and appraisal of NGOs ID projects. They also argue that standard project methodologies (such as PMBOK Guide) and those specifically developed for NGOs (such as PM4DEV and PMDPro1) share many similarities but also exhibit some differences. While Golini and Landoni (2014) claim that standard project management methodologies could be complemented by specific tools such as the logical framework in order to increase the likelihood that high social impact transpires, Hermano, Lopez-Paredes, Martin-Cruza and Pajares (2013) argue that logical framework approach faces a number of drawbacks proposing PMD Pro1 instead, as a more efficient tool for managing ID projects successfully. PMD Pro1 provides a platform-independent exploration of the principles and terminology of project management within the context of the international development sector (Hermano et al., 2013). Among a number of success factors, we have noticed that PMD Pro1 identifies multi-stakeholder and cross-sector partnerships and collaborations of NGOs for the purpose of exchanging ideas and knowledge throughout the project life, as one of most important critical success factors of NGOs ID projects. This is also reflected in the Sustainable Development Goals (SDGs) idea of global partnership for development, which emphasises importance of networking, and encourages organizations to adopt a knowledge-based networking approach to development. Knowledge network approaches to knowledge management imply that the social dynamics between individuals, rather than the structural dimensions of ICTs, are the key factors in facilitating knowledge sharing, and form the core of knowledge management practice (Van den Hooff & Huysman, 2009). Ferguson et al., 2010) explain that instrumental approaches to knowledge management as a management tool neglect the contextual and social-practice specificities of knowledge. So, the authors argue that only a mutual learning perspective in generating situated knowledge paves the way for opportunities and solutions that are more relevant to development beneficiaries. This is because situated mutual knowledge is characterized by a willingness to explore complementary views, looking at the consequences of each and what makes a difference, and testing against experience in the context.

Given the above, we find that developing a model that would optimize the integration of social capital and knowledge management in ID NGOs would support more effective management of ID projects and, ultimately, aid delivery. What is needed is a model that would promote a collaborative approach to deal with the uncertainty and risk inherent in working on development problems of the 'wicked' variety (Ramalingam, Laric & Primrose, 2014). Ramalingam et al. (2014) explain that evidence in a number of areas – from disease to urbanisation, from conflict to climate change, from economic growth to governance

reforms – suggests that the underlying problems remain unaddressed, forcing programmes to adapt and change. These authors further state that the mismatch between the reality of the problems faced and many of the assumptions that guide analysis and action poses a considerable challenge to the sector. So, their recommendation is that development actors should work collaboratively across their organisations as well as with key partners inside and outside the sector, and share experiences and challenges to take this work forward. Ika, Diallo and Thuillier (2012) highlight that the specific objectives ID projects aim to achieve and the contexts under which they work are the reasons why standard project management approaches often fail. Crawford and Pollack (2004) emphasise that the nature of projects is crucial for understanding how to select the best project management tools and methodologies. According to their classification, it is obvious that NGOs ID projects are more "soft" than "hard" because they often have very ambiguously defined goals, based on abstract concepts, and are oriented towards qualitative rather than quantitative success. Therefore, NGOs ID projects are subject to many external and internal influences outside the control of NGOs, and NGOs need to explore alternative solutions through more stakeholder consultation, and to place more value on these relationships and discussions with stakeholders since these may reveal different cultures and meanings.

In order to define a model, we have first analyzed the models based on various categories of knowledge such as Demerest's model modified by McAdam and McCreedy (1999), the models of Nonaka and Takeuchi (1995), Hedlund and Nonaka (1993), Boisot (1987) and intellectual capital models, such as that of Edvinsson (1997). We have noticed that all these models directly or indirectly recognize the importance of social capital for knowledge management. However, they are either focused on inputs related to one knowledge management phase, such as knowledge creation (as in the case of Demerest's model), or on the type of knowledge necessary for the organization (as in the case of other cited models). Therefore, we have found that Gasik's model (2011), due to its unique project orientation and process-oriented nature, would be the most suitable. This model explains how the project knowledge management process flows from identification of knowledge needed, knowledge acquisition and creation, knowledge transfer, to knowledge application and knowledge sharing. It shows the relations between those processes describing both the micro-knowledge and macro-knowledge life cycles of each organizational level, as well as the processes of vertical knowledge flow between all organizational levels (individual, project and organizational) (Gasik, 2011). It is also easy to comprehend and allows for simple incorporation of social capital elements in each of the knowledge lifecycle stages, which we find very important given the novelty of our research and the fact that the surveyed organizations are yet to develop their knowledge management systems and social capital

3. Methods

During the period of 2016–2019, we collected data on the role of social capital of nonprofit organizations in the context of knowledge management and management and organizational processes. The findings of this research represent a further development of our research work so far relying on similar backgrounds but addressing different goals and research questions, validating thus the consistency and holistic nature of our scientific approach.

3.1. Description of the sample

Our sample consists of 215 surveyed nonprofit, nongovernmental civil society-based organizations (NGOs) in the European Union (EU) and Western Balkans (WB) that implement international development and cooperation projects aimed at improving the quality of life of marginalized groups of people. The surveyed ID NGOs come from 28 EU national platforms that bring together around 2,000 EU NGOs (CONCORD 2017), 47 international networks that include around 2,000 EU NGOs (Social Platform 2017), and 1000 WB NGOs working actively in the field of international cooperation and development (Sterland & Rizova, 2010). We initially sent an invitation to 5000 ID NGOs either directly or through the networks mentioned above. We received 245 completed questionnaires, of which 30 had to be excluded because they were either not fully answered or not consistent in answers (for example the respondent had indicated they were part of senior management, but were not aware of any of key organizational features: projects, age, employees, etc.). Overall, in regard to the quality of the sample, we used a stratified approach in order to secure that the surveyed population (ID NGOs in EU and WB) 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 ID 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%.

The reason we have chosen ID NGOs from these two regions is that we wanted to assess the extent to which contextual and developmental differences which ID NGOs from these regions are faced with might influence the phenomena we examined. While the EU region is characterized as economically and socially developed, with (internationally) experienced, resourceful and networked ID NGOs, the WB region suffers from sluggish democratic reform, corruption, unemployment and a fragile peace, and relatively weaker (local) ID NGOs that work for a European perspective and social justice. These differences are in fact typical of the North–South socio-economic and political divide, with the North usually defined as the richer and more developed and the South as the poorer and less developed region. Such a sampling approach makes our findings valuable not only for the ID NGOs that operate in the EU and WB regions but also to all ID NGOs that work globally in more and less developed contexts.

The surveyed ID NGOs are both young and mature, large and small organizations. While the youngest organization surveyed was only 1 year-old and the oldest 98, the majority of them are between 10 and 20 years old. Regarding their financial capacities, the surveyed ID NGOs run both small- and large-scale projects which at the end of the year are reflected in their annual turnover. Locally based organizations are more likely to run small scale projects (5-10 per year) and grants (up to 100 000 euro) while international organizations operate with large scale projects (over 20 per year) worth millions of euro. The surveyed ID NGOs vary a lot in regard to the number of people who participate in the work of the organization and their type of engagement. While smaller local organizations often have only a couple of full-time paid staff, there are international organizations that employ over 4000 people locally and internationally. However, apart from officially employed staff, it is important to mention that surveyed ID NGOs also rely on their constituencies in their work, that is, on members and volunteers of their organizations who sometimes number in excess of 5000.

In regard to the scope of work, the surveyed ID NGOs are nonprofit and nongovernmental associations of citizens and foundations implementing local and international development and cooperation projects and programs. The projects and programmes typically aim to improve the overall social, political and economic contexts that directly influence the quality of life of people, especially those who live on the social margin (youth, children, women, elderly, disabled, etc.). The majority of the surveyed ID NGOs work in international development and cooperation (20.5%), and in most cases they come from the EU. Other surveyed ID NGOs define themselves as being engaged either in local development (16.7%) or in culture, media and education (9.3%), environment and wellness (12.1%), philanthropy and humanitarian aid (9.8%), social services (19.1%) and civil society and voluntarism (12.6%). The surveyed ID NGOs are partners to a number of state and non-state ac-

tors due to their natural bridging role between policy makers and final beneficiaries - citizens. They are also members of numerous local and international networks.

As for their location, 60% of the surveyed ID NGOs are based in the EU (out of which a majority come from Belgium – 11, followed by Greece – 8, Croatia – 8, Germany – 7, Italy – 7, etc.) while 40% are located in the WB (Serbia, Montenegro, North Macedonia, Albania, Bosnia and Herzegovina). While the majority of EU-based ID NGOs are gathered around the CONCORD – European Federation of Humanitarian and Development NGOs as well as Social Platform, operating in over 200 development states, the WB based ID NGOs are gathered around Balkan Network for Development of the Civil Society. These were the sources through which we approached the surveyed ID NGOs.

Turning to management structure, the majority of the surveyed ID NGOs that are of pure voluntary and activist nature often have a loose management structure. In order to organize their workflow efficiently, ID NGOs whose operations are project based have some form of structure with clear division of roles among project team members, with the manager of the organization usually also positioned as a project manager. Those ID NGOs that run long term and large-scale international projects and programs, have a formal organizational structure and defined systems and processes.

3.2. Data collection and analysis

In our research we used meta-analysis, surveying, content analysis and interviews as the key methods of data collection and analysis.

Meta-analysis was performed as our starting activity. We first assessed the available literature related to social capital, knowledge management, project knowledge management and project management of ID NGOs in order to develop a strong theoretical background for our research goal and questions and to inform our methodology. Then, based on findings from the literature review, we determined the social capital and knowledge management variables and identified the model (as described in Section 2.4) that could best facilitate integration of social capital and knowledge management of ID NGOs and contribute to more efficient project management of ID NGOs and aid delivery.

In order to determine the variables of social capital, we focused on four dimensions of social capital: structural, relational, cognitive (Nahapiet & Ghoshal, 1998) and nodal (Phelps et al., 2012). Within the structural variables we examined the extent to which organizations operate through their first degree alters, that is, through direct interaction with individuals and organizations in their networks (closed ties - (Singh, 2005)) and through their second degree alters, that is, indirect interaction with individuals and organizations in their networks (open ties - (Burt, 2004)). We also examined the extent to which organizations acquire a central position in their networks as a result of their leadership position in the sector and network projects (network position - (Burt, 2004)), and to what extent similarity in management, leadership and administering styles of organizations in the networks make them structurally equivalent (structural equivalency - (Walker, 1985)). Within the relational variables, we examined to what extent the organization establishes and maintains efficient relationships (intensive and long-term communication - (Marsden & Campbell, 1984)), close cooperation (closeness of actors - (Hansen & Løvås, 2004; Sampson, 2007; Simonin, 1999)) and collaboration based on mutual belief (trust – (Fukuyama, 1995)) with individuals, teams and networks. We also examined the extent to which individuals, teams and networks exchange their resources, accept the scope of foreseen actions and standards (reciprocity, norms and sanctions - (Putnam, 1993)) as well as show readiness to fulfil their obligations with the expectation of being rewarded in return (obligations and expectations - (Burt, 1992)). Within the cognitive variables, we examined the extent to which the individuals, teams and networks communicate internally and externally through commonly understood codified messages (shared narratives - (Orr, 1990)), values, vision and goals (common values, vision and goals - (Tsai & Ghoshal, 1998)). Within the nodal variables, we examined the geographic distance between network organizations (diversity of network contacts - (Perry-Smith, 2006)) as well as relative power based on material and non-material resources (power - (Rothaermel & Hess, 2007)). We also examined the preconditions necessary for knowledge to be effectively managed (capacity to receive and transfer knowledge - (Rothaermel & Alexandre, 2009); depth of knowledge - (Tallman & Phene, 2007)) between individuals, teams and networks. Finally, due to the particularities of nonprofit sector operations, we decided to examine respect, power derived from results and power derived from influence (on decision makers), as relational and nodal variables, which the regression analyses, later, proved to be highly important to knowledge management. Therefore, we consider these to add additional value to this research.

In order to determine the variables of knowledge management, we focused on four key knowledge management stages: creation/innovation, acquisition/collection, dissemination/share and usage/application (Bukowitz & Williams, 2000; McElroy, 2003; Meyer & Zack, 1996; Wiig, 1993). Within the knowledge creation variable, we examined the extent to which organizations innovate knowledge through exchanges with other individuals, groups and networks (Lee & Choi, 2003). Within the knowledge acquisition variable, we examined the extent to which organizations manage to collect missing knowledge and particularly transform collected experiences/tacit knowledge into concrete/explicit knowledge (Nonaka, 1994). Within the knowledge dissemination variable, we examined the extent to which organizations exchange experiences/tacit knowledge through social and collaboration processes (Nonaka & Takeuchi, 1995) and transfer concrete/explicit knowledge from one source to another (Argote & Ingram, 2000). Within the knowledge usage variable, we examined the usefulness and reliability of tools and procedures for accumulating knowledge and data, standardization and clarity of systematized knowledge and data, systems for storing data and prevention of data and knowledge loss, and the simplicity of knowledge and data usage (Bosilj Vukšič, Milanović & Gombašek, 2010; Rathi & Given, 2017).

Our literature review found that neither social capital nor knowledge management variables have uniformly established scales (measures in percentages). While in knowledge and project management field the Likert scale is one of the most commonly used methods for posing questions and operationalization of measures (Ika et al., 2012; Khang & Moe, 2008; Müller & Turner, 2007; Qureshi, Warraich & Hijazi, 2009), we have found that (social and organizational) network analysis is the most common method used by social capital researchers for reconstructing networks of relationships (mapping and measuring of relationships and flows between people, groups and organizations). However, we found the latter approach was not applicable in our case as the large size of our sample and the complexity of ID NGOs projects posed challenges for in-depth ecosystem/network analyses. The network analysis approach demands prior collection of data not solely from our focal respondents (ego) but those they collaborate with (alters), too. In the testing phase of our research, it emerged that: a) our focal respondents who manage ID projects were reluctant to reveal with whom, when and why they establish relations and b) the number of stakeholders and type of relations created during ID projects is not constant, therefore providing the temporary list of contacts might have led us to unreliable results and inconsistent conclusions. To that end, we opted for the methodological approach applied by Uhlaner, Matser, Berent-Braun and Flören (2015), Swift and Hwang (2013), Becerra, Lunnan and Huemer (2008), Brookes et al. (2006), Muthusamy and White (2005), etc., who managed to operationalize the social capital measures using the self-rating, including Likert scales as well as qualitative classifications. Brookes et al. (2006) find self-rating to be a subjective concept rooted in the self-perception of respondents but also a necessary evil, as reflected by other similar investigations of social concepts in projects that have resorted to self-rating measurements (Herzog, 2001). Therefore, we decided to include also content analysis and in-depth interviews as qualitative meth-

Table 1
Input and output variables and their link to the literature.

INPUT VARIABLES	
SAMPLE-SPECIFIC VARIABLES	**Link to the literature cited in the theoretic and methodological part of the paper**
Years of work	
Number of projects, employees, volunteers.	
Management structure of the organization	
Geographic location of the organization	
Scope of work the organization/prevailing activity	
SOCIAL CAPITAL (inter/intra-organizational levels)	
S1 - Number of ties (network openness)	Burt, 2004
S2 - Number of direct ties (network closeness)	Singh, 2005
S4 - Network position (central)	Burt, 2004
S5 - Structural equivalency	Walker, 1985
R1a - Strength of ties (intensity of communication)	Marsden & Campbell, 1984
R1b - Strength of ties (longevity of ties)	Marsden & Campbell, 1984
R2 - Closeness of actors	Simonin, 1999; Sampson, 2007; Hansen & Lovas, 2004
R3a, 3b, 3c - Trust (individuals, teams, organizations)	Fukuyama, 1995
R4 – Respect	-
R5a, 5b, 5c - Reciprocity (individuals, teams, organizations)	Putnam, 1993
R6 - Norms (and respecting the norms)	Putnam, 1993
R6b – Sanctions	Putnam, 1993
R7 - Obligations and expectations (individuals, teams)	Burt, 1992
K1 - Common vision and goals	Tsai & Ghoshal, 1998
K3 - Common organizational values	Tsai & Ghoshal, 1998
K5 - Common narrative	Orr, 1990
N1 - Diversity of network contacts	Perry-Smith, 2006
N2a - Power (material/immaterial resources)	Rothaermel & Hess, 2007
N2b - Power (achieved results)	-
N2c - Power (level of influence)	-
N3 - Capacity for receiving/transferring knowledge	Rothaermel & Alexandre, 2009
N4 - Depth of knowledge	Tallman & Phene, 2007
OUTPUT VARIABLES	
KNOWLEDGE MANAGEMENT	Bukowitz & Williams, 2000; McElroy, 1993; Wiig, 1993; Meyer & Zack, 1996 Lee & Choi, 2003
KC - Knowledge creation (innovation of knowledge through exchanges with other individuals, groups and networks)	
KA - Knowledge acquisition (collection of missing knowledge and transformation of tacit knowlegde into explicit knowledge)	Nonaka, 1994
KD - Knowledge dissemination (share of tacit knowledge through social and collaboration processes and transfer os explicit knowledge from one source to another)	Nonaka & Takeuchi, 1995; Argote & Ingram, 2000
KU - Knowledge usage (usefulness and reliability of tools and procedures for accumulating knowledge and data, standardization and clarity of systematized knowledge and data, system for storing data and prevention of data and knowledge loss, simplicity of usage of knowledge and data)	Bosilj Vukšič, Milanović & Gombašek, 2010; Rathi & Given, 2017

ods sufficient to validate, confirm and deepen the Likert based survey findings.

The survey conducted with 215 ID NGOs was our central method of research with the goal of examining the correlation between social capital and knowledge management and their mutual influence. The key instrument used for the survey was a questionnaire based on a Likert scale (1-5). The questionnaire was composed of 99 questions encompassing control, dependent (social capital) and independent (knowledge management) variables. The questionnaire was tested by 10 NGOs prior to being presented to the sample in order to identify and remove any deficiencies that could compromise the quality of the resulting data. The survey was conducted electronically through "SoGoSurvey" allowing access from all electronic devices (computer, laptop, notebook, tablets, cell phone). The platform also allowed us to export all data to a software used for processing and analyzing results. All data gathered through the survey were analyzed using PASW statistics software, version 20. We used descriptive statistics to measure central tendency and percentage. The questions relating to specific groups were summed up in a scale to present an interval variable and satisfy one of the prerequisites for regression analysis (De Vaus, 2002). We used t-test for independent samples, ANOVA or Mann-Whitney and Kurskal-Wallis test to determine if there are statistically significant differences between continuous variables. Chi-squared test was used to identify the importance of differences between categorical variables. In order to establish correlations between the examined variables, we 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. In order to reduce the subjectivity of the self-perception of the respondents we decided to include content analysis and in-depth interviews in our research as qualitative methods to validate, confirm and deepen the Likert based survey findings.

Interpretative content analysis was performed with aim to refine and validate the results gathered through the survey, but also to provide additional understanding of how ID NGOs establish and nurture their organizational social capital and manage their knowledge. We have chosen the interpretive content analysis because its approach is not restricted by coding rules of traditional content analysis so it was possible to have the flexibility to analyze the context in a wholesome manner (Ahuvia, 2001; Yanow & Schwartz-Shea, 2006). Through the synthesis of relevant information gathered via ID NGOs statutes (20), registrations (20), organograms (15), employment policies (10), annual organizational reports (10), project reports (10) and organizational reviews (5), it was possible to understand the interdependencies between social capital and knowledge management both on organizational and project levels as well as obtain greater understanding of the context in which ID NGOs work and implement their projects.

Semi-structured qualitative interviews were performed with aim to deepen our understanding of findings from the survey and content

analysis. Interviews were based on twelve core questions around the following topics: (a) existing and missing skills-knowledge-attitudes, (b) most commonly used learning and sharing methods, (c) available resources for organizational development purposes, (d) capacities for integration of learning into project, programmes and strategies. The interviews were conducted via Skype with 10 ID NGOs that also participated in the survey. The 10 NGOs came from different sectors (4 from international development and cooperation, 2 from local development, 2 from social protection development, 1 from philanthropy development, 1 from civil society and voluntarism development) and regions (6 from EU and 4 from WB). The interviews were conducted with project managers of ID NGOs who have at least 5 years of experience in project management and 3 years of work for the same ID NGO. The average duration of an interview was 1 hour.

3.1. Input and output variables

In our research we use three types of variables: sample specific as categorical variables, social capital as input variables and knowledge management as output variables.

In regard to **sample specific variables**, we focused on years of work, number of projects, number of paid and non-paid staff, location of work, scope of work and management structure.

In regard to **social capital input variables**, we focused on:

- the structural dimension of social capital, that is, on the total number of contacts, direct ties, network position and structural equivalence;
- the relational dimension of social capital, i.e. nature of the established relation (intensive and long-term communication), trust, closeness, reciprocity, norms and sanctions, and obligations and expectations;
- the cognitive dimension of social capital, that is, shared narrative, common values, vision and goals;
- the nodal dimension of social capital, i.e. diversity of network contacts power (based on resources, results and influence), capacity to receive and transfer knowledge and depth of knowledge.

In regard to **knowledge management output variables**, we focused on:

- knowledge creation, that is, the extent to which organizations innovate knowledge through exchanges with other individuals, groups and networks;
- knowledge acquisition, i. e. the extent to which organizations manage to collect the missing knowledge and, particularly, transform tacit knowledge into explicit knowledge;
- knowledge dissemination, that is, the extent to which organizations exchange tacit knowledge through social and collaboration processes and transfer explicit knowledge from one source to another;
- knowledge usage, that is, the usefulness of knowledge management tools, standardization of knowledge, data storage and prevention of data loss, and the simplicity of knowledge usage.

Table 1 provides information on key variables used and their link to the cited literature in the theoretic and methodology part of the paper.

4. Results and discussion

The main purpose of this paper was to explore the social capital and knowledge management of NGOs as non-profit and project-based organizations that operate in the complex international development contexts, as well as to search for a model that could optimize their mutual integration for the purpose of more effective project management. We will present the results and discuss them in respect to the related research questions. The research questions of this paper are consistent with some previous work (Mikovic, 2019; Mikovic et al., 2019a, 2019b), which explored social capital in the context of knowledge management processes, with strong focus on knowledge usage, and searched for the most suitable knowledge management maturity model that would be based on social capital features applying the artificial neural networking method.

What social capital elements are the key drivers of knowledge management in ID NGOs?

In order to answer this question, we needed to conduct a series of statistical analyses. We first checked the level of internal consistency between all the social capital and knowledge management variables examined. When it comes to the external (inter-organizational) social capital of an organization, the scale consisted of 21 questions and showed a satisfactory level of internal consistency with Cronbach alpha at α=.815, split-half (Spearman-Brown coefficient) reliability at .816 and average item correlation with the overall score at r=.58. When it comes to the internal (intraorganizational) social capital of an organization, a 23-question scale showed a satisfactory level of internal consistency with Cronbach alpha atα=.925, split-half (Spearman-Brown coefficient) reliability at .883 and average correlation of items with overall score at r=.59. Finally, when it comes to knowledge management, the scale consisted of 9 questions and showed a high 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 od r=.61. The surveyed ID NGOs evaluated their external, internal social capital and knowledge management as specified in the Tables 2–4.

We then checked whether there were links between the elements and dimensions of social capital and knowledge management in order to confirm which of the variables can be correlated in the model to assess the influence of social capital on knowledge management in an organization. As shown in Table 5, the correlations between elements of social capital and knowledge management are of different strengths.

As shown in Table 6, the structural dimension of external (interorganizational) social capital is not correlated to knowledge management, except for knowledge acquisition in a very mild way, while the relational, cognitive and nodal dimension display a moderate correlation. The structural dimension of internal (intraorganizational) social capital shows moderate correlation with knowledge management, while relational, cognitive and nodal dimension show considerably high correlations.

Consistent with selected previous research (Mikovic, 2019; Mikovic et al., 2019a, 2019b), and with the key theoretical standpoints presented in Section 2 of the paper, this paper also confirms mutual links between social capital and knowledge management. We find that all social capital dimensions play an important role in resource sharing (Pinheiro, Serodio, Pinho and Lucas, 2016), although to a different extent. Open ties represent the main prerequisite for creating/innovating knowledge because they offer access to different and new ideas (Beckman & Haunschild, 2002). Closed ties are ideal for knowledge exchange because the ties between participants are strong and deep (Ahuja, 2000; Coleman, 1988; Singh, 2005); strong ties help us to build trust and reciprocity between individuals, which hinders opportunism and increases expectations from the cooperation (Uzzi & Lancaster, 2003). Strong ties increase individual awareness of how to access knowledge and readiness to invest in transferring, receiving and using knowledge (Kachra & White, 2008). Strong ties also positively influence adoption of innovations (Kraatz, 1998), knowledge transfer (Williams, 2007) and the creation of organizational knowledge (Capaldo, 2007). Trustworthiness influences the formation of social network ties for the generation of new ideas and innovation (Shazi, Gillespie & Steen, 2015). Norms reinforce trust and long-term contractual obligations improving project collaboration and performance (Benitez-Avila, Hartmann, Dewulf & Hensler, 2018). Common narrative, organizational goals and values facilitate interpretation and simplify semantic systems between participants (Cicourel, 1973; Orr, 1990; Tsai & Ghoshal, 1998) which encourages accumulation and usage of knowledge. Knowledge depth of the receiver and source, increases motivation and ability to transfer and receive knowledge

Table 2
Social capital of the organization – descriptive data for interorganizational level.

Social capital dimensions and elements	Mean	Std. Dev.	Skewness	Kurtosis	Kolm-Smir.
R6 Norms (and respect of norms)	4.46	.594	-.725	.310	.325*
R4 Respect	4.43	.607	-.689	.202	.314*
R5 Reciprocity	4.24	.766	-.884	.575	.298*
S1 Number of ties (network openness)	4.24	.890	-1.460	2.452	.258*
S2 Number of direct ties (network closeness)	4.20	.696	-1.291	4.151	.310*
R1b Strength of ties (duration)	4.20	.736	-1.463	4.469	.312*
R3 Trust	4.13	.657	-.542	.867	.309*
N3 Capacity to receive and transfer knowledge	3.99	.730	-.568	.891	.296*
N2b Power (results)	3.94	.780	-.908	1.605	.326*
K1 Common vision and goals	3.83	.809	-.488	.211	.284*
N2a Power (resources)	3.83	.898	-1.294	2.181	.353*
K3 Common values	3.82	.688	-.364	.284	.327*
R1a Strength of ties (intensity)	3.74	.830	-.866	.761	.349*
N4 Depth of knowledge	3.74	.890	-.628	.487	.326*
R7 Obligations and expectations	3.68	.908	-.464	-.184	.269*
K5 Common narrative	3.60	.790	-.649	.775	.303*
S4 Network position (central)	3.57	.929	-.425	-.418	.277*
N1 Diversity of network contacts	3.55	.734	-.493	.651	.293*
N2c Power (influence)	3.47	1.049	-.557	-.408	.281*
R2 Closeness of actors	3.45	1.017	-.566	-.247	.233
S5 Structural equivalency	3.22	.955	-.266	-.555	.229

** <.01.
* <.05.

Table 3
Social capital of the organization – descriptive data for intraorganizational level.

Social capital dimensions and elements	Mean	Std. Dev.	Skewness	Kurtosis	Kolm-Smir.
R5a Reciprocity (individuals)	4.41	.670	-1.091	1.508	.307*
R3a Trust (towards individuals)	4.38	.706	-1.259	2.595	.293*
R4 Respect (mutual)	4.38	.685	-.910	.677	.298*
R3c Trust (towards organization)	4.34	.671	-.711	.221	.280*
K3 Common values	4.31	.809	-1.375	2.404	.277*
R5b Reciprocity (teams)	4.31	.676	-.829	.999	.266*
R3b Trust (towards teams)	4.27	.726	-.694	-.023	.264*
R1a Strength of ties (intensity)	4.20	.831	-1.317	2.227	.291*
S2 Number of direct ties (closeness)	4.18	.676	-.877	2.356	.299*
S1 Number of ties (openness)	4.17	.719	-.574	.166	.257*
K1 Common vision and goals	4.13	.783	-.714	.541	.246*
N3 Capacity to receive and transfer knowledge	4.11	.744	-.587	.196	.271*
N2b Power (results)	4.08	.796	-1.152	2.446	.307*
R6a Norms (and respect of norms)	4.07	.713	-.968	2.693	.314*
R1b Strength of ties (duration)	4.01	.925	-.708	-.298	.252*
N2a Respect (resources)	3.97	.773	-.749	.987	.310*
R7a Obligations and expectations (individuals)	3.90	.862	-.739	.553	.289*
R7b Obligations and expectations (teams)	3.89	.828	-.847	1.010	.319*
N4 Depth of knowledge	3.87	.727	-.672	1.140	.332*
K5 Common narrative	3.87	.812	-.594	.110	.310*
N2c Power (influence)	3.81	.855	-.718	.516	.307*
R2 Closeness of employees	3.68	.943	-.643	.370	.259*
R6b Sanctions	3.08	1.135	.211	-.905	.192

** <.01.
* <.05.

Table 4
Knowledge management of the organization – descriptive data for each explored KM stage.

	Mean	Std. Dev.	Skewness	Kurtosis	Kolm-Smir.
KD3 Share of tacit knowledge	3,96	,716	-,562	,589	,321*
KC Innovation of knowledge	3,94	,895	-,917	,869	,297*
KA1 Collection of missing knowledge	3,84	,765	-,409	,344	,287*
KU4 Simplicity of usage of knowledge and data	3,78	,868	-,502	,114	,267*
KA3 Transformation of tacit into explicit knowledge	3,73	,934	-,571	-,186	,285*
KD1 Transfer of explicit knowledge	3,65	,959	-,470	-,171	,247*
KU3 Storing and prevention of data and knowledge loss	3,64	1.013	-,679	-,224	,308*
KU1 Usefulness and reliability of tools and procedures	3,57	1.015	-,549	-,413	,287*
KU2 Standardization and clarity of knowledge and data	3,41	1.005	-,459	-,575	,283*

** <,01.
* <,05.

Table 5
Correlation between knowledge management and elements of social capital

Elements of social capital-interorganizational level		Knowledge creation	Knowledge acquisition	Knowledge dissemination	Knowledge usage
S1 Number of ties (network openness)	Pearson r	.070	*.147**	.073	.011
	Sig. (2-tailed)	.308	.031	.287	.868
S2 Number of direct ties (network closeness)	Pearson r	.085	.113	*.136**	.036
	Sig. (2-tailed)	.214	.100	.046	.603
S4 Network position (central)	Pearson r	-.023	.066	.074	.062
	Sig. (2-tailed)	.735	.336	.278	.368
S5 Structural equivalency	Pearson r	-.073	.037	-.083	.097
	Sig. (2-tailed)	.288	.588	.223	.155
R1a Strength of ties (intensity of communication)	Pearson r	*.194***	*.183***	.086	*.149**
	Sig. (2-tailed)	.004	.007	.210	.029
R1b Strength of ties (longevity of ties)	Pearson r	*.144**	*.173**	.103	*.274***
	Sig. (2-tailed)	.034	.011	.134	.000
R2 Closeness of actors	Pearson r	.125	*.071*	.100	.099
	Sig. (2-tailed)	.066	.301	.143	.149
R3 Trust	Pearson r	*.195***	*.219***	*.189***	*.193***
	Sig. (2-tailed)	.004	.001	.005	.005
R4 Respect	Pearson r	*.200***	*.293***	*.166**	.119
	Sig. (2-tailed)	.003	.000	.015	.082
R5 Reciprocity	Pearson r	*.231***	*.187***	**.299****	.017
	Sig. (2-tailed)	.001	.006	.000	.803
R6 Norms (and respecting the norms)	Pearson r	*.269***	**.361****	*.293***	**.303****
	Sig. (2-tailed)	.000	.000	.000	.000
R7 Obligations and expectations	Pearson r	*.237***	*.289***	*.241***	**.390****
	Sig. (2-tailed)	.000	.000	.000	.000
K1 Common vision and goals	Pearson r	*.219***	**.333****	*.159**	*.263***
	Sig. (2-tailed)	.001	.000	.020	.000
K3 Common organizational values	Pearson r	.113	*.203***	.081	*.141**
	Sig. (2-tailed)	.099	.003	.234	.039
K5 Common narrative	Pearson r	*.140**	*.139**	.089	**.318****
	Sig. (2-tailed)	.040	.042	.193	.000
N1 Diversity of network contacts	Pearson r	.047	.002	.030	.116
	Sig. (2-tailed)	.494	.980	.660	.090
N2a Power (material/immaterial resources)	Pearson r	*.209***	*.170**	.106	*.215***
	Sig. (2-tailed)	.002	.013	.120	.002
N2b Power (achieved results)	Pearson r	**.310****	**.351****	*.289***	**.299****
	Sig. (2-tailed)	.000	.000	.000	.000
N2c Power (level of influence)	Pearson r	*.182***	*.281***	.104	*.268***
	Sig. (2-tailed)	.007	.000	.128	.000
N3 Capacity for receiving/transferring knowledge	Pearson r	**.371****	**.307****	**.375****	*.278***
	Sig. (2-tailed)	.000	.000	.000	.000
N4 Depth of knowledge	Pearson r	**.304****	**.370****	*.161**	*.193***
	Sig. (2-tailed)	.000	.000	.018	.004
Elements of social capital -intraorganizational level		**Knowledge creation**	**Knowledge acquisition**	**Knowledge dissemination**	**Knowledge usage**
S1 Number of ties (network openness)	Pearson r	**.364****	**.374****	*.140**	*.214***
	Sig. (2-tailed)	.000	.000	.041	.002
S2 Number of direct ties (network closeness)	Pearson r	**.326****	*.211***	.110	*.225***
	Sig. (2-tailed)	.000	.002	.106	.001
R1a Strength of ties (intensity of communication)	Pearson r	**.373****	**.410****	**.319****	**.322****
	Sig. (2-tailed)	.000	.000	.000	.000
R1b Strength of ties (longevity of ties)	Pearson r	*.193***	*.254***	.114	.158*
	Sig. (2-tailed)	.005	.000	.096	.021
R2 Closeness of actors	Pearson r	**.378****	**.336****	**.301****	*.173**
	Sig. (2-tailed)	.000	.000	.000	.011
R3a Trust (towards individuals)	Pearson r	**.411****	**.435****	*.268***	**.300****
	Sig. (2-tailed)	.000	.000	.000	.000
R3b Trust (towards teams)	Pearson r	**.419****	**.417****	**.352****	**.347****
	Sig. (2-tailed)	.000	.000	.000	.000
R3c Trust (towards organization)	Pearson r	**.374****	**.427****	**.367****	**.356****
	Sig. (2-tailed)	.000	.000	.000	.000
R4 Respect (mutual)	Pearson r	**.347****	**.412****	**.324****	*.276***
	Sig. (2-tailed)	.000	.000	.000	.000
R5a Reciprocity (individuals)	Pearson r	**.374****	**.396****	**.315****	*.262***
	Sig. (2-tailed)	.000	.000	.000	.000
R5b Reciprocity (teams)	Pearson r	**.438****	**.486****	**.391****	**.347****
	Sig. (2-tailed)	.000	.000	.000	.000
R6a Norms (respecting the norms)	Pearson r	**.329****	**.339****	**.298****	**.300****
	Sig. (2-tailed)	.000	.000	.000	.000
R6b Sanctions	Pearson r	*.262***	*.295***	*.147**	**.412****
	Sig. (2-tailed)	.000	.000	.031	.000

(*continued on next page*)

Table 5 (*continued*)

Elements of social capital-interorganizational level		Knowledge creation	Knowledge acquisition	Knowledge dissemination	Knowledge usage
R7a Obligations and expectations (individuals)	Pearson r	**.417****	**.486****	.289**	**.413****
	Sig. (2-tailed)	.000	.000	.000	.000
R7b Obligations and expectations (teams)	Pearson r	**.364****	**.400****	*.254***	**.400****
	Sig. (2-tailed)	.000	.000	.000	.000
K1 Joint vision and goals	Pearson r	**.324****	*.294***	*.284***	**.335****
	Sig. (2-tailed)	.000	.000	.000	.000
K3 Joint organizational values	Pearson r	**.431****	**.362****	*.294***	*.278***
	Sig. (2-tailed)	.000	.000	.000	.000
K5 Joint narrative	Pearson r	**.427****	**.386****	**.337****	**.468****
	Sig. (2-tailed)	.000	.000	.000	.000
N2a Power (material/non-material resources)	Pearson r	**.322****	**.332****	*.201***	*.179***
	Sig. (2-tailed)	.000	.000	.003	.009
N2b Power (achieved results)	Pearson r	**.301****	**.328****	*.218***	*.274***
	Sig. (2-tailed)	.000	.000	.001	.000
N2c Power (level of influence)	Pearson r	**.359****	*.296***	*.202***	**.317****
	Sig. (2-tailed)	.000	.000	.003	.000
N3 Capacity for receiving/transferring knowledge (employees)	Pearson r	**.535****	**.400****	**.446****	**.394****
	Sig. (2-tailed)	.000	.000	.000	.000
N4 Depth of knowledge	Pearson r	**.355****	*.254***	**.349****	*.293***
	Sig. (2-tailed)	.000	.000	.000	.000

** <.01.
* <.05.

Table 6
Correlation between the dimensions of social capital and knowledge management.

Dimensions of social capital – interorganizational level		Knowledge creation	Knowledge acquisition	Knowledge dissemination	Knowledge usage
Structural dimension	Pearson r	.015	*.151**	.073	.091
	Sig. (2-tailed)	.828	.027	.284	.183
Relational dimension	Pearson r	.344**	.372**	.314**	.337**
	Sig. (2-tailed)	.000	.000	.000	.000
Cognitive dimension	Pearson r	.212**	.301**	.148*	.326**
	Sig. (2-tailed)	.002	.000	.030	.000
Nodal dimension	Pearson r	.382**	.408**	*.278***	.373**
	Sig. (2-tailed)	.000	.000	.000	.000
Dimensions of social capital – intraorganizational level		**Knowledge creation**	**Knowledge acquisition**	**Knowledge dissemination**	**Knowledge usage**
Sreuctural dimension	Pearson r	.425**	.363**	.154*	.270**
	Sig. (2-tailed)	.000	.000	.024	.000
Relational dimension	Pearson r	.532**	.579**	.418**	.471**
	Sig. (2-tailed)	.000	.000	.000	.000
Cognitive dimension	Pearson r	.495**	.436**	.383**	.452**
	Sig. (2-tailed)	.000	.000	.000	.000
Nodal dimension	Pearson r	.516**	.446**	.387**	.403**
	Sig. (2-tailed)	.000	.000	.000	.000

** <.01.
* <.05.

(Fey & Furu, 2008) and innovate (Almeida & Phene, 2004). The bigger the absorption capacities of organizations the better the quality of knowledge transfer (Szulanski, 1996), and the better the ability to use knowledge transfers in order to create new knowledge (Smith, Collins & Clark, 2005). The power derived from organizational role encourages adoption and implementation of innovations (Ibarra, 1993). In essence, these findings lead us to conclude that once created, transferred and adopted, knowledge continues into new creation, transfer and adoption with the help of social interactions. This cyclical feedback between social capital and knowledge can be regarded as a powerful tool for organizational advantage (Nahapiet & Ghoshal, 1998). Table 7 summarizes the links and influences between social capital and knowledge management identified through this research and their coherence with the existing findings from the literature.

How can the project knowledge management model facilitate integration of social capital and knowledge management of ID NGOs?

In order to answer this question, we first conducted a regression analysis in order to define social capital-knowledge management models. Then we allocated the most appropriate project knowledge management model. Hierarchical regression models that we include only the variables that show at least moderate correlation with criterion variables. In most cases there were at least several of them with a high correlation. Nevertheless, in several cases, due to intercorrelations of predictor variables, some variables with a lower correlation proved to be more successful in predicting the criterion variable.

As shown in Table 8, in the case of knowledge creation, two dimensions of internal social capital with high correlations to this variable were the first to be included. The dimensions in question are intrarelational and intranodal. Both displayed a notable predictive capacity for the criterion variable. In the second step, the model remained relevant due to the addition of the intracognitive dimension. However, due to a high correlation with the intrarelational dimension, the model's predictive capacity decreased. In the third step, after adding the intrastructural dimension, the relational dimension was fully excluded from the model. By introducing the variable of the internodal dimension from the external social capital, the model predicted a significantly higher variance,

Table 7
The influence of social capital on knowledge management –attributes to key theoretical standpoints

Social capital- *interorganizational level*	**Knowledge management** Creation	Acquisition	Dissemination	Usage	***THEORY - LITERATURE***
STRUCTURAL DIMENSION					
Number of ties (network openness)		x			(Ahuja, 2000, Beckman and Haunschild, 2002).
Number of direct ties (network closeness)			x		(Ahuja, 2000); Durcikova & Gray, 2009.
Network position (central)					-
Structural equivalency					-
RELATIONAL DIMENSION					
Strength of ties (communication intensity)	X	X		x	(Still and Strang, 2009).
Strength of ties (longevity)	X	X		x	(Capaldo, 2007, Kraatz, 1998).
Closeness of actors					(Sampson, 2007, Simonin, 1999).
Trust	X	X	x	x	(Nahapiet and Ghoshal, 1998)
Respect	X	X	x		*N/A (new element tested by the researcher)*
Reciprocity	X	X	**X**		Uzzi & Gillespie, 2002
Norms (and respecting the norms)	X	**X**	x	**X**	(Nahapiet and Ghoshal, 1998)
Obligations and expectations	X	X	x	**X**	(Nahapiet and Ghoshal, 1998)
COGNITIVE DIMENSION					
Common vision and goals	X	**X**		x	(Tsai and Ghoshal, 1998)
Common organizational values		X		x	(Tsai and Ghoshal, 1998)
Common narrative	x	x		**X**	(Nahapiet and Ghoshal, 1998)
NODAL DIMENSION					
Diversity of networks contacts					-
Power (material/immaterial resources)	x	x		x	(Rothaermel and Hess, 2007)
Power (achieved results)	**X**	**X**	x	**X**	*N/A (new element tested by the researcher)*
Power (level of influence)	x	x		x	*N/A (new element tested by the researcher)*
Capacity to acquire/transfer knowledge	**X**	**X**	**X**	x	(Pennings and Harianto, 1992, Sawyer, Evans and Bosua, 2014).
Depth of knowledge	**X**	**X**		x	(Sawyer, Evans and Bosua, 2014, Tallman and Phene, 2007).

Social capital - *intraorganizational level*	**Knowledge management** Creation	Accumulation	Dissemination	Usage	***THEORY - LITERATURE***
STRUCTURAL DIMENSION					
Number of ties (openness)	**X**	**X**	x	x	(Burt, 2004, Perry-Smith, 2006) (Cummings, 2004, Singh, 2005).
Number of direct ties (closeness)	**X**	x		x	(Fleming, Mingo and Chen, 2007, Hulsheger, Anderson and Salgado, 2009).
RELATIONAL DIMENSION					
Strength of ties (communication intensity)	**X**	**X**	**X**	**X**	(Kachra and White, 2008, Marsden and Campbell, 1984, Tsai and Ghoshal, 1998).
Strength of ties (longevity)	x	x			(Chen, Huang and Hsiao, 2010).
Closeness of actors	**X**	**X**	**X**	X	(Hansen and Løvås, 2004).
Trust (towards individuals)	**X**	**X**	x	**X**	(Nahapiet and Ghoshal, 1998)
Trust (towards teams)	**X**	**X**	**X**	**X**	(Nahapiet and Ghoshal, 1998)
Trust (towards organization)	**X**	**X**	**X**	**X**	(Nahapiet and Ghoshal, 1998)
Respect (mutual)	**X**	**X**	**X**	X	*N/A (new element tested by the researcher)*
Reciprocity (individuals)	**X**	**X**	**X**	X	**-**
Reciprocity (individuals)	**X**	**X**	**X**	**X**	**-**
Norms (respecting norms)	**X**	**X**	**X**	**X**	(Nahapiet and Ghoshal, 1998, Putnam, 1993)
Sanctions	x	x	x	**X**	(Putnam, 1993)
Obligations and expectations (individuals)	**X**	**X**	x	**X**	(Fey and Furu, 2008, Nahapiet and Ghoshal, 1998)
Obligations and expectations (teams)	**X**	**X**	X	**X**	(Fey and Furu, 2008, Nahapiet and Ghoshal, 1998)
COGNITIVE DIMENSION					
Common vision and goals	**X**	x	x	**X**	(Tsai and Ghoshal, 1998)
Common organizational values	**X**	**X**	x	X	(Tsai and Ghoshal, 1998)
Common narrative	**X**	**X**	**X**	**X**	(Nahapiet and Ghoshal, 1998)
NODAL DIMENSION					
Power (material/immaterial resources)	**X**	**X**	x	X	(Ibarra, 1993)
Power (achieved results)	**X**	**X**	x	X	*N/A (new element tested by the researcher)*
Power (level of influence)	**X**	x	x	**X**	*N/A (new element tested by the researcher)*
Capacity to acquire/transfer knowledge (of employees)	**X**	**X**	**X**	**X**	(Sawyer, Evans and Bosua, 2014, Smith, Collins and Clark, 2005, Szulanski, 1996).
Depth of knowledge	**X**	x	**X**	X	(Almeida and Phene, 2004, Sawyer, Evans and Bosua, 2014).

X – higher relevance; x – lower relevance

while other social capital dimensions did not contribute to the model. This model (number 4 in the Table) predicts an overall of 35.4% variance in the criterion variable.

As shown in Table 9, in the case of knowledge acquisition, only the interrelational dimension significantly predicts correlation on the scale of internal social capital. In the second step, we entered the dimensions of external social capital into the model. These dimensions show correlation with knowledge acquisition, but only internodal is left in the model. This model (number 2 in the Table), predicts an overall of 36.4% variance in the criterion variable.

As shown in Table 10, in the case of knowledge dissemination, due to weak initial correlations and mutual intercorrelations between predictor variables, the model failed to function as quickly as in step 2, with the introduction of the intracognitive dimension. The dimensions of external social capital did not contribute to the model, which means that this criterion variable has a strong prediction correlation

Table 8
Social capital and knowledge creation model.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.094	.408		-.231	.818
	Intrarelational dimension	.043	.011	.333	4.100	.000
	Intranodal dimension	.088	.026	.278	3.426	.001
2	(Constant)	-.183	.406		-.450	.653
	Intrarelational dimension	.028	.013	.215	2.225	.027
	Intranodal dimension	.080	.026	.251	3.090	.002
	Intracognitive dimension	.087	.039	.186	2.216	.028
3	(Constant)	-.531	.436		-1.219	.224
	Intrarelational dimension	.018	.013	.142	1.390	.166
	Intranodal dimension	.079	.026	.247	3.059	.003
	Intracognitive dimension	.080	.039	.171	2.049	.042
	Intrastructural dimension	.115	.055	.146	2.097	.037
4	**(Constant)**	-.970	.468		-2.072	.039
	Intranodal dimension	.078	.023	.246	3.367	.001
	Intrastructural dimension	.122	.051	.155	2.375	.018
	Intracognitive dimension	.103	.034	.221	3.073	.002
	Internodal dimension	.048	.017	.166	2.724	.007

a. Dependent Variable: Knowledge creation

Table 9
Social capital and knowledge acquisition model.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.358	.347		1.030	.304
	Intrarelational dimension	.058	.011	.527	5.467	.000
	Intranodal dimension	.017	.022	.062	.769	.443
	Intracognitive dimension	.004	.033	.010	.118	.906
2	**(Constant)**	-.195	.372		-.524	.601
	Intrarelational dimension	.055	.007	.495	8.277	.000
	Internodal dimension	.050	.015	.204	3.420	.001
3	(Constant)	-.319	.430		-.743	.459
	Intrarelational dimension	.054	.007	.486	7.403	.000
	Internodal dimension	.049	.016	.199	3.000	.003
	Interrelational dimension	-.008	.016	-.037	-.504	.615
	Intercognitive dimension	.042	.027	.095	1.546	.124

a. Dependent Variable: knowledge acquisition

Table 10
Social capital and knowledge dissemination model.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	1.467	.356		4.116	.000
	Intrarelational dimension	.030	.009	.289	3.264	.001
	Intranodal dimension	.046	.023	.180	2.030	.044
2	(Constant)	1.414	.357		3.960	.000
	Intrarelational dimension	.021	.011	.201	1.897	.059
	Intranodal dimension	.041	.023	.160	1.790	.075
	Intracognitive dimension	.052	.034	.139	1.505	.134
3	(Constant)	1.001	.445		2.250	.025
	Intrarelational dimension	.023	.010	.225	2.353	.020
	Intranodal dimension	.045	.022	.176	1.997	.047
	Interrelational dimension	.026	.015	.126	1.731	.085

a. Dependent Variable: knowledge dissemination

only with the intrarelational and intranodal dimensions. This model (number 1 in Table) predicts a total of 19% variance in the criterion variable.

As shown in Table 11, in case of knowledge usage, only the intrarelational and intracognitive dimensions of internal social capital showed contribution to the model. However, the internodal and intercognitive dimensions of external social capital significantly contributed to the model this time. This model (number 4 in the Table) predicts a total of 28.5% variance in the criterion variable.

Fig. 1 is the sum of all models based on previous analyses that show which dimensions and elements of external (inter-organizational) and internal (intra-organizational) social capital can be integrated into the knowledge management model due to strong correlations between predictor (social capital) and criterion (knowledge management) variables.

Table 11
Social capital and knowledge usage model.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.302	1.491		1.544	.124
	Intrarelational dimension	.140	.041	.302	3.418	.001
	Intracognitive dimension	.382	.147	.229	2.596	.010
2	(Constant)	1.823	1.541		1.183	.238
	Intrarelational dimension	.111	.047	.239	2.332	.021
	Intracognitive dimension	.355	.149	.213	2.391	.018
	Intranodal dimension	.119	.098	.104	1.208	.228
3	(Constant)	-.489	1.673		-.292	.770
	Intrarelational dimension	.099	.042	.213	2.367	.019
	Intracognitive dimension	.381	.144	.229	2.656	.009
	Internodal dimension	.221	.065	.216	3.384	.001
4	**(Constant)**	-1.691	1.766		-.957	.339
	Intrarelational dimension	.096	.041	.206	2.304	.022
	Intracognitive dimension	.327	.145	.197	2.257	.025
	Internodal dimension	.193	.066	.189	2.907	.004
	Intercognitive dimension	.237	.118	.128	2.006	.046

a. Dependent Variable: Knowledge usage

Having in mind the fact that ID NGOs are project- and process-oriented, that they need knowledge in order to solve certain problems and deliver their aid more effectively, that they acquire knowledge from their internal and external environment, often systematized through a knowledge repository, a project knowledge management model based on social capital is proposed in this paper, shown in Fig. 2. This is a modified version of Gasik's (Gasik, 2011) project knowledge management model. We first harmonized knowledge management phases with the theoretical research concept and then made links to the internal and external social capital elements. The elements confirmed through regression analysis are highlighted in green and blue, while the elements partially proved by this research, and also in other studies, are highlighted in red.

Since the goal of this research was to propose a model that would help ID NGOs manage their project knowledge more efficiently to obtain better use of their social capital in order to deliver their aid more effectively, we first analyzed a number of existing models that could serve as a starting point. Our conclusion was that existing knowledge management models could be improved by adding the dimension of social capital. Models based on knowledge categories such as Nonaka's (1994), Hedlund and Nonaka (1993), Boisot (1987) and on intellectual capital, such as Skandia's (Edvinsson, 1997), all contain some form of direct or indirect recognition of the importance of social capital for knowledge management. It is precisely this that allows us to further explore the influence of social capital on knowledge management. However, the research can only be theoretical because these models do not discuss processes and practices in knowledge management; they only serve to categorize knowledge types that are necessary for an organization, as well as methods for acquiring that knowledge. Although created to promote a holistic and process-centered approach to knowledge, and in spite of being based on a social paradigm that can be interpreted in the context of an organization's social capital, models based on social construction, such as Demerest's modified model (1999), all have the same limitation: a focus on inputs that are directed to a single phase, i.e. knowledge creation. Having in mind the nature of ID NGOs' projects, as well as the fact that knowledge in these organizations is process-, project-, holistic- and phase-oriented, we have used an adaptation of Gasik's model, as previously explained. The model algorithm proposed by Gasik offers a simple sequence of steps and simplicity is very important since the surveyed organizations are yet to develop their knowledge management system and social capital. Therefore, attention must be paid to ensure a graphic representation that is, at the same time, both informative and easy to use. Consequently, we will provide below a more detailed description of why and how this model can be useful for ID NGOs.

How can the integrated model we propose contribute to more efficient project management of ID NGOs, project-based organizations that operate in ID sector and project management in general?

The model starts with the presumption that when ID NGOs implement certain task or project it is about project managers that are usually in need of certain knowledge. Project managers frequently seek general knowledge related to the issue their projects are focused on (i.e. migration, poverty, corruption, etc.) but also require a very specific expert type of knowledge (i.e. policy making, advocacy, networking, multi-actor and cross sector cooperation, etc.) or technical advice related to a number of project managerial and organizational issues (i.e. action planning, time management, people development, monitoring, evaluation and reporting, etc.). Project managers in ID NGOs usually acquire the necessary project knowledge internally (through an organizational knowledge repository and qualified individuals) or externally (through outsourced consultants). Being aware that they, together with policy-makers and donors, are political actors at the interface between knowledge and policy, ID NGOs have a role to play in strengthening policy processes, not just in improving policy content – but in developing strategies (inform, link, engage, consult, collaborate, build capacities) to engage systematically with different groups of actors (citizens, researchers, civil society, etc.) and different types of knowledge, as wide dialogue and debate provide richer evidence base (Jones, Jones, Walker & Shaxson, 2012). This is even more important at the micro-level of development practice, since an uncritical adoption of a 'one size fits all' approach to ethics processes for educational and international development could fail to address the challenges posed by the conscientious implementation of an ethic of respect for the dignity of partners and those served by those partners (Mason, Crossley & Bond, 2019). Our interviews and content analysis reveal that project managers in ID NGOs are in need of both traditional project knowledge (technical, general and specialist) but also modern project management skills (such as project crowdfunding, digital campaigning, project adaptation, etc.) and methods of learning (hubs, labs, job shadowing, mentoring, internships, etc.). However, lack of resources has been identified as the most serious obstacle to acquiring improved project knowledge and skills. In most cases project managers are faced with the situation that in their organizations the existing project knowledge and skills are neither institutionalized through organizational repositories nor has project managers' knowledge needs and counter measures been systematized at all. Essentially, this is because ID NGOs do not manage their project knowledge strate-

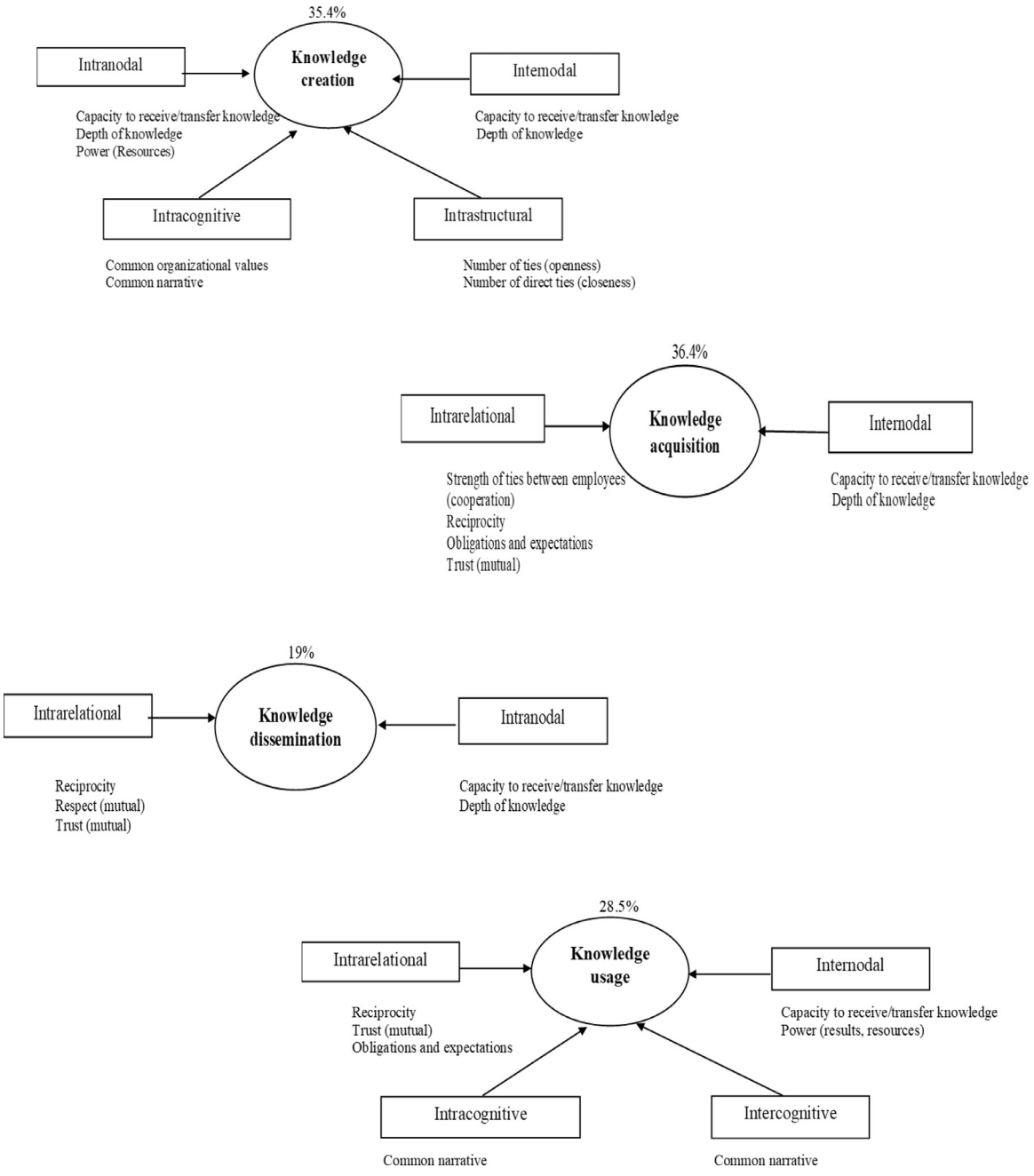

Fig. 1. Knowledge management models based on social capital.

gically; it is most often managed on a case-by-case basis (from project to project) and usually dependent on project environment and donor requests. The social capital of the organization has still has not been recognized as a mechanism for expanding acquisition, dissemination, and use of project knowledge. With the present model, we help both project managers and heads of ID NGOs understand the basic principles of project knowledge management and determine what specific internal and external social capital interventions should be deployed to support more successful project management and enable optimized aid delivery:

(a) *When acquiring* project knowledge, the model suggests that in regard to internal sources, it is the quality of ties between employees and project teams (open, long-lasting and recurring cooperation) and reciprocal exchange of information and knowledge that dictate the extent to which missing project knowledge will be acquired. The more intensive the ties and reciprocal exchanges – the better the access to project information for project managers. In regard to external sources, project managers should be aware that acquisition of project knowledge from interorganizational relationships is dependent upon sufficient capacity for information transfer between partner ID NGOs and their project managers. Our interviews and content analysis reveal that ID NGOs often opt to nurture internal links, through their organizational policies, culture and employee rulebooks in order to promote trust between employees and eventually more efficient exchange of missing project information and knowledge. However, bearing in mind that rules, rights and obligations are most often a part of standard agreements, project managers in ID NGOs should rather think about how to explore opportunities to promote team work, cohesion, leadership, and decision-making that would unlock trust, respect and mutuality. Also, it has been no-

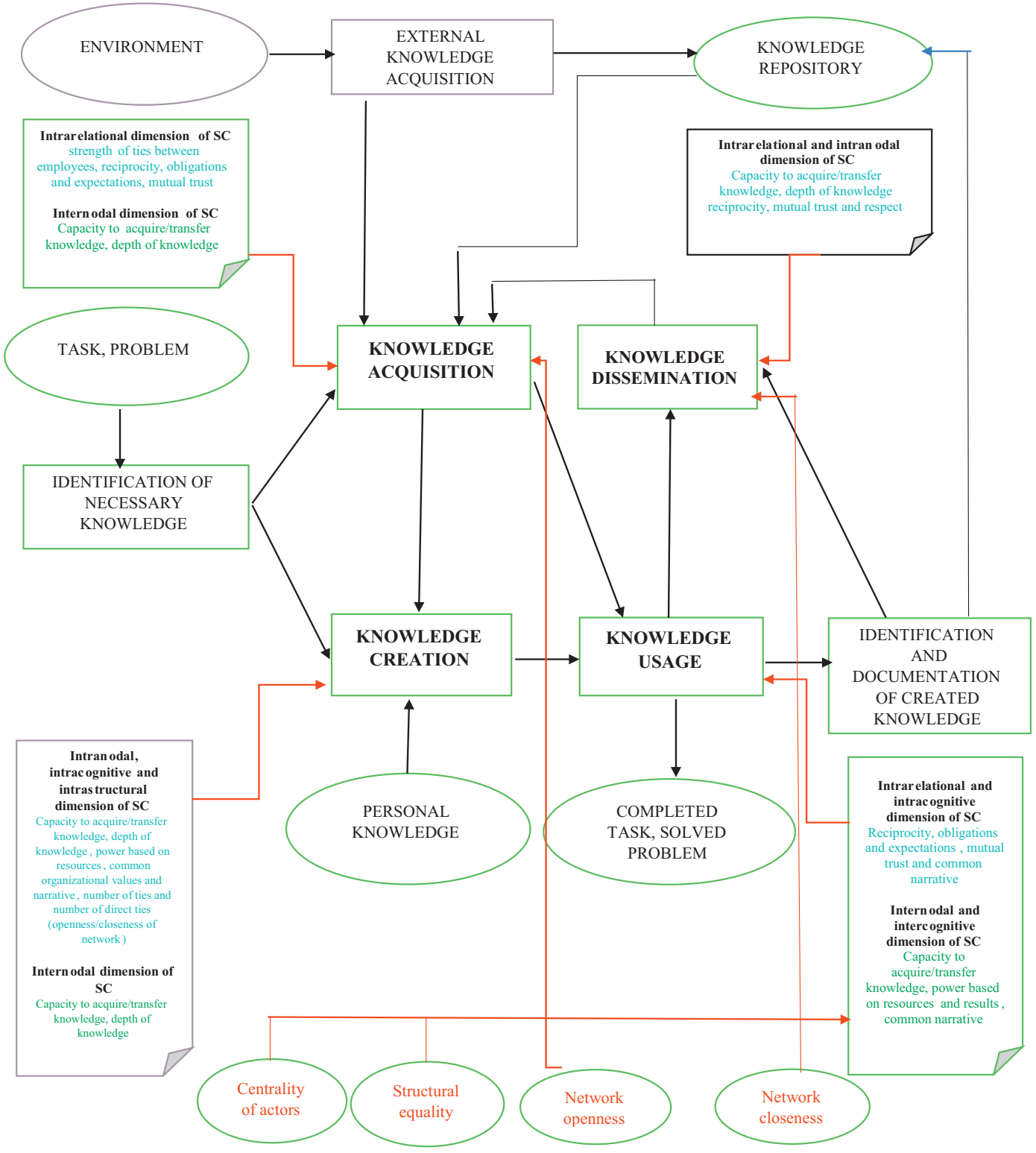

Fig. 2. Integrated project knowledge management model based on social capital.

ticed that project managers in ID NGOs in most cases implement projects in line with the organizational mission and previous experiences but often need to upgrade their knowledge in order to be able to receive and transfer the missing project knowledge. In order to do so, project managers in ID NGOs should invest in development of people but also transferring their individual project knowledge to the organizational and network project knowledge.

(b) *When creating the missing project knowledge*, the model suggests that if trying to innovate internally, through employees and project teams, what is key is the prior capacity to receive and transfer project knowledge and the number of ties that have been established. The more talented (in terms of sufficient project knowledge and capacity to absorb new project knowledge) and collaborative is the project workforce, the more access to information is needed by the project

manager for innovation of project knowledge. If trying to innovate externally, as in the case of knowledge acquisition, project managers in ID NGOs cannot be innovators if their capacity for receiving and sharing project knowledge is weak and they have poor prior project knowledge. Our interviews and content analysis reveal that ID NGOs face serious obstacles to attract and retain talented and well-networked project management workforce. In most cases, this is caused by ID NGOs donor dependence, short project cycles and irregular and/or low salaries. On the other hand, ID NGOs do tend to create networks and alliances with other similar organizations and individuals; they use the synergy of their project results and project managers' experiences to create space for new project solutions that can be presented to donors. However, sometimes the investment of organizations and their project managers in socialization (links and networks) exceeds the value brought by their creation (i.e. number and quality of projects) so they need to be more careful when developing and managing their project ecosystems.

(c) *When using the acquired and innovated project knowledge*, the model suggests that usage of project knowledge is internally dependent upon mutual respect and reciprocal relationships between employees and project teams, exchange of resources, including common vision, goals and narrative. Externally, it is dependent upon sufficient capacity of networked ID NGOs and their project managers to receive, absorb and transfer project knowledge, and their readiness to use project achievements as a resource that provides lessons learned. Also, the centrality of an ID NGO's position in its networks and its similarity with other network members are key prerequisites for project knowledge usage. Some previous research on social capital in the context of knowledge management revealed that the influence of social capital on project knowledge usage is the least researched aspect so far (Mikovic et al., 2019a). On the other hand, both the interviews and content analysis confirm that documenting and storing of tacit and explicit knowledge, learning from past project experiences and integrating these into new projects, programs and strategies (double learning loops) are the most critical project management practices of ID NGOs.

(d) *When disseminating the acquired and innovated project knowledge*, the model suggests that efficient sharing and transfer of project knowledge is internally dependent upon sufficient capacities of employees and project teams to receive project knowledge as well as their mutual respect, trust and exchange of resources. The more equipped with knowledge, trusted and respected people in the organization are, the higher the level of project knowledge dissemination between project managers and the entire organization. Externally, the more similarity between networked ID NGOs and their project managers, the more effective the adoption and transfer of tacit project knowledge is. Our interviews and content analysis reveal that project managers in ID NGOs disseminate their project knowledge both internally, among their employees and projects teams, as well as externally, among project managers from their network members through manuals, newsletters, workshops, meetings. However, almost always, this practice is not strategic but rather is managed in an ad-hoc fashion from project to project and issue to issue. When it is not systematized, such knowledge becomes difficult to access and apply by project managers in similar future project initiatives, which demotivates project managers, teams and partners, exhausts their mutual trust and commitment and, eventually, slows down project collaboration, learning and adaptation.

To sum up, the integrated model we propose, explored the importance of social interactions for more efficient project management of ID NGOs and provides important messages for all project-based organizations that operate in the ID sector. The ID NGOs studied showed the same features as project-based organizations in general: they had broad partnerships, networked operations and temporary organizational structures, and they were contract oriented, multi-stakeholder, cross-sectoral and cross-cultural based and were flexible and adaptable in providing tailor made solutions. A key message for project based-organizations in the ID sector is that internal and external social capital are important for management of international development projects to leverage the project knowledge management process and solve development problems that are highly challenging because of their so called "wicked" nature. In other words, it is about situational problems highly dependent on the context in which they occur, as explained by Ramalingam, Laric and Primrose (2014), and on the consultations with affected people that are usually unjustifiably excluded due to lack of principled approach to affectedness, as explained by Jokubauskaite (2020). International development projects deal with complex thematic areas on local, national, international and global levels (including poverty reduction, governance, climate change and sustainable development) in challenging environments, social political and economic. These complexities and challenges make international development projects fragile and demand a high level of engagement of internal and external stakeholders from the very beginning of project life cycle (i.e. project initiation, programming, analyses, etc.). Capturing lessons of international development thinking and experience through systematic access to pertinent sector and local knowledge is important for proper project management since the choice of relevant indicators is itself dependent on such knowledge (Picciotto, 2019). Early cross-sectoral and multi-stakeholder involvement and careful maintenance/nurture will reduce misunderstanding and enhance mutual trust, respect, shared ownership and narrative. Investments in developing collaborative knowledge and practices tend to pay off in terms of improved performance, but they should be conducted coherently with the project's environment including stakeholder involvement, monitoring and reporting to the stakeholders and local communities (Golini, Kalchschmidt & Landoni, 2014). Strong knowledge-based partnerships, collaborations and networks pave the way for reaching opportunities and solutions most relevant for final beneficiaries. Eventually, project management practices designed and used to promote cooperation and reciprocal obligations and roles generate incentives for superior performance essential to ensure coherence, equity and effectiveness of collective impact (Picciotto, 2019).

The model we propose suggests that project-based organizations pay careful attention to a) technical, administrative, interpersonal, cultural, networking and knowledge competency of project managers and team members, and b) motivation driven by clear understanding of project goals, mission, roles, tasks, mutual trust and respect. We see these as key enablers of social resources embedded in relationships to unlock the success of the project knowledge management process and ensure overall success. As do Khang and Moe (2008), we argue that despite the conventional wisdom that the competence of the project designers, planners and the project management team is most related to success, the empirical evidence shows that bridging and bonding links of stakeholders and everything that makes these links functional are far more important in influencing project success, at least for international development projects. As do Ika and Donnelly (2017), we also argue that high levels of multi-stakeholder commitment, collaboration, alignment, and adaptation are necessary for projects to succeed. Empirical evidence shows that integration of project knowledge management elements in all phases of stakeholder engagement unlocks stakeholders' resources located in employees, project teams, organizational knowledge repositories and network operations, and leads to better understanding of mutual interests and needs as well as creation of a culture of accountability, trust and respect. To that end, we strongly advocate for further improvement of current PM methodologies from the perspective of efficient and effective stakeholder management as a basis for establishment of holistic model for efficient and effective project management.

5. Conclusion

The paper explored the social capital and knowledge management of ID NGOs as nonprofit and project-based organizations that operate in the complex international and local development contexts, and searched for a model that could optimize their mutual integration for the sake of their more effective project management and delivery of aid.

The paper provided a general learning point for PM from ID when it comes to social capital and knowledge management of project based organizations. We find that project experience and knowledge gained via systemic interactions with project stakeholders are important for more efficient project management and more effective delivery of results. Creation and nurturing of relations are crucial leverage for project knowledge management process that should obtain delivery of benefits for stakeholders and end-users. So, the project management should keep a balance between two focuses: on *how something is done* and w*ith whom it is done*.

The paper provided a number of specific results and conclusions of practical value to general project management practitioners, specialized ID NGOs project managers and also of value to the theoretical literature on social capital, knowledge management, knowledge project management, ID project management and project management. First, we have empirically documented that social capital elements are key drivers of knowledge management in ID NGOs. This is, as far as we are aware, the very first research of its kind in the nonprofit and nongovernmental sector. Second, we have identified a model to facilitate integration of social capital and knowledge management of ID NGOs. The proposed model is a modified version of Gasik's (Gasik, 2011) project knowledge management model. The proposed model is of practical value to project managers since it reveals how and when to use social capital to create, acquire, disseminate and use project knowledge in order to manage their international and local projects more effectively. The proposed model fits the project- and process-oriented nature of ID NGOs operations. The algorithm of the model offers a holistic, easily understandable, sequence of steps and the simplicity of this model is very important because ID NGOs are yet to develop their project knowledge management systems and social capital. Finally, the model proposed contributes to project management practices and tools used by NGOs and other project-based organizations that operate within complex international development contexts. We know that multi-stakeholder, cross-sectoral and cross-cultural partnerships and collaborations of NGOs and project-based organizations, for the purpose of exchange of ideas and knowledge throughout the project life, have been identified as one of most important critical success factors of ID projects (PMD Pro1). Our model enables multi-stakeholder, cross-sectoral and cross-cultural dynamics in all phases of project life cycle, urging key stakeholders to be engaged from the very first project phase in order to secure the culture of accountability and respect. Such an approach enhances the readiness and ability of stakeholders to provide smart solutions to "wicked" problems as well as to adapt in a timely fashion to emerging contexts. Enabling organizational and personal interactions of project stakeholders via their project experience and knowledge, our model unlocks resources necessary for more effective programming, implementation and follow-up of development assistance.

6. Limitations of the study and implications for further research

Nevertheless, it has to be stressed that this research has certain limitations, very similar to those addressed in some previous papers (Mikovic et al., 2019a, 2019b). First, only a specific type nonprofit sector actor has been examined here, i.e. nongovernmental organizations with characteristics different from other nonprofit organizations (such as state and local government, political parties, unions, universities) which operate under different missions, values and goals. Second, the territory covered by this research refers to Europe. Therefore, the results of this survey are of explicit value to project-based NGOs in the EU and WB whose work is linked to international and local development issues while of implicit value to the nonprofit sector in general and worldwide (richer and more developed North and poorer and less developed South). Third, although none of the demographic variables of NGOs studied including age and size show any significant correlations (difference) in relation to social capital, so that researchers treat all studied NGOs as a homogeneous set, it would be beneficial for future studies to address the heterogeneity of NGOs, in terms of project management and their roles in international development, in a more explicit manner. Fourth, our modelling was based on the linear regression approach which assumes that predictive residuals are Gaussian-distributed. This is a reasonable assumption provided that there is a linear dependency of the data and the target. In our experiments, we were able to show that there is a significant level of linear dependency but the analysis also shows that there are likely non-linearities in the data which linear regression is not capturing. Modelling such patterns would require more non-linear solutions, i.e. through neural networks. On the other hand, there are no well-established ways of conducting statistical analysis and analyzing impacts of different inputs for such models. In other words, artificial neural networking would provide models with 100% of accuracy but no sound explanation on causalities. In this manuscript, we opted for interpretability that is for less precise models but sound relations as our goal was to provide IJPM readers with explanation on social capital influence on knowledge management of non-profit and project-based organizations that operate in the complex international and local development contexts. Finally, this research, being the first study that examines the relationship between social capital, knowledge management, project knowledge management and project management in the ID nonprofit and nongovernmental sector, provides findings that are only partly comparable to findings of similar studies from other industries. It would therefore be useful to conduct similar studies in other types of nonprofit sectors and across different geographic regions. This would not only provide a basis for more explicit evidence on the influence of organizational internal and external social capital on knowledge management in the ID project oriented nonprofit sector, but it would also create much needed scientific data necessary for the literature of social capital, knowledge management, knowledge project management and (ID) project management.

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