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KNOWLEDGE SHARING AS A MEANS FOR CAPACITY BUILDING IN INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS IN ECUADOR

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by

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DEDICATION

I dedicate this dissertation to my husband Rodrigo Cobos and my mother Esperanza Silva, who gave me hope and support when I needed it most at home and when I was abroad studying at the University of New Mexico (UNM). Their faith in me kept me focused in pursuing and achieving this goal.

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ABSTRACT

The purpose of this research was to study factors that facilitate technical knowledge sharing internally in international non-governmental organizations (INGOs) in Ecuador. Using a qualitative design, and semi-structured interviews this study examined knowledge sharing practices in four INGOS located in Quito, capital of Ecuador.

The findings supported nine factors identified in the literature as influencing knowledge sharing practices. These factors included (1) organizational culture, (2) role in organization, (3) procedures for managing knowledge, (4) perceived value of knowledge sharing, (5) media used for sharing information, (6) management practices, (7) organizational structure, (8) mission and strategy, and (9) organizational climate and motivation. In addition, seventeen new factors emerged in the Ecuadorian context to influence knowledge sharing. All these factors not only support knowledge sharing in INGOs but also increase people's skills for capacity building so that INGOs can fulfill their missions effectively.

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CHAPTER 1

INTRODUCTION

The purpose of this research is to study the factors that facilitate technical knowledge sharing internally in international non-governmental organizations (INGOs) located in Ecuador. INGOs face currently the way to share information inside the organization effectively. The problem of INGOs is the lack of a sound understanding of the essential factors that contribute to knowledge sharing within their organizations.

INGOs need to share information within and outside the organization. If INGOs share knowledge, communication flows in a better way, and information is updated. This allows it to develop and strengthen its capacities, in order to improve their performance in all areas of the organization, and become aligned with the National Development Plan, also called National Plan for Good Living (NPGL) 2017-2021 which cares to eradicate poverty by improving the quality of life of people and respect for nature by creating policies that help meeting the issues raised. The revised economic policy aims to reduce poverty and social inequality. This has improved standards in education and health, in relation to previous periods. All of the new policies and actions fundamentally seek to change the economic structure of the country. A sustainable and diversified economy is oriented towards knowledge and innovation, achieving a living wage for Ecuadorians. The NPGL is promoted through public policies by preserving the environment through sustainable management of resources and natural heritage. The government of Ecuador, through the NPGL, encourages the participation of social organizations (NGOs) as promoters of social transformation, also known as the Citizen Revolution politic party. In order to make all this possible, a '*plurinacional*' (multi-national), democratic, anti-colonial and influential state is needed, assuming an anti-capitalist role. In order to achieve the

objectives set out in the NPGL, program planning helps establish public policies in the short, medium and long term, while it serves as the bridge to articulate the strategic level with the executing state level. It has a methodology to evaluate the design, implementation, and effects that have policies, programs and public projects. The NPGL has developed a methodological guide for the formulation of goals and indicators for the development plans and land management (Secretaría Nacional de Planificación y Desarrollo, 2007).

According to the Executive Decree 812 of July 5, 2011, INGOs located in Ecuador can be sanctioned if they do not provide the documentation (operative plans) to the government or if they do not comply with the provisions of the Basic Agreement for Operation (which is a bilateral cooperation agreement) in order to promote institutional strengthening, create conditions for proper transfer of capacity and skills to the beneficiaries, and ensure the sustainability of the processes undertaken by international cooperation with regard to national sovereignty and the process of political, economic and social transformation undertaken by Ecuador. Therefore, the Technical Secretariat for International Cooperation can suspend their activities in this country if these organizations do not comply with this regulation. As a result, 26 INGOs were suspended on August 29, 2016, for failing to provide the required documentation to the Ecuadorian government. Besides, the Decree 22 restricts INGOs to route international cooperation towards achieving the objectives outlined in the National Plan for Good Living (NPGL). Moreover, INGOs focus on the values of ethics, accountability, and transparency in their management practices and have external pressures from government, donors, and the public. Thus, INGOs need to share their information with the government, in order to align and help implement both of the plans mentioned

throughout the programs and projects that these social organizations develop in this country (Guia OSC, 2013).

Therefore, it is necessary to study the factors that influence knowledge sharing in order to understand their benefits and limitations as well as to identify information and knowledge gaps, bottlenecks in the flow of knowledge, information related to present and future knowledge, and the place and format of information in the organization (Smith & Lumba, 2008).

There is a paradigm shift in the acceptance of organizations and social groups that have adapted to the new knowledge society. This is a paradigm shift since it is a perception accepted usually by society as a model to follow. Knowledge sharing is considered a synonym of knowledge transfer, or at least they may have overlapping content. Within knowledge management, there are two fundamental processes. The first is the creation of knowledge and the second is the transmission of knowledge (knowledge sharing), which are closely interrelated. In operational terms, some processes in organizations require changes in formal structures and major processes to alter the organizational design and adapt gradually to new requirements (Gilli, Arostegui, Doval, Iesulauro, & Schulman, 2013). Lehner (2012) defines knowledge sharing as "The exchange of knowledge between and among individuals, and within and among teams, organizational units, and organizations. This exchange may be focused or unfocused, but it usually does not have a clear a priori objective." In contrast, Grant & Dumay (2015) define it as "Including a variety of interactions between individuals and groups; within, between, and across groups; and from groups to the organization." Both definitions refer to transporting knowledge from one place to another, but sharing focuses on exchange of knowledge among individuals, teams

and organizations whereas transfer focuses on interactions between individuals and groups within the organization.

Need

International Non-Governmental Organizations (INGOs) located in Ecuador use mostly tacit knowledge which is based on individuals' experiences and perceptions making it difficult to capture and share. This has involved sometimes poor compliance targets, top-down reproduction of labor relations, low impact levels, and a bad image in the eyes of the international cooperation and public in general. Their status as non-profits has been understood as a lack of demand towards efficient performance in technical and administrative procedures (Flor, 2007). Regarding relations with communities, activities are limited to the terms of the project carried out, which does not extend to an understanding of the whole local situation, neither does it articulate the processes of planning and local development. There are also INGOs working in the same communities without strengthening their capacities and human capital. The need for more coordination is necessary to contribute to local and regional development. INGOs that assume the role of information hubs in the development field can benefit from re-thinking knowledge management (KM) as a concept that facilitates innovative forms of collaboration between development stakeholders, beyond formal organizational boundaries (Heizmann, 2008). However, many employees are still reluctant to share their knowledge or to build a learning organization, although knowledge sharing and management contribute many benefits to organizations (Jennings, 2011). Therefore, the need for this research is based on investigating how to improve the INGOs performance through the recognition that knowledge sharing might enhance the way they share information internally and externally.

Problem

INGOs currently face many problems related to capacity building, four of which are the key challenges identified by USAID (2010). a) There is a misunderstanding about the definition and scope of capacity building as a field and as an approach. b) It lacks indicators for capacity building standardized evaluation. c) There is also a lack of local ownership, as well as limited tools available to facilitate the implementation of capacity building programs. d) Some of the challenges of capacity building are in sharing knowledge, which can be related to an ineffective management performance. Some causes or reasons cited by Flor (2007) are:

1) Most of officers, directors or heads, are people focused on the vision and goals of the organizations, but lack experience in administration or management.

2) Another cause is the inadequate way of obtaining tacit knowledge from employees in order to turn it into explicit knowledge with value for the organization and that can be used later.

3) Information and data necessary to advance projects are kept in the hands of few people in the organization which is an obstacle for knowledge sharing.

4) Weaknesses of internal communication.

There are different types of knowledge. One of the current classifications is "tacit" and "explicit". Tacit knowledge is "… being understood without being openly expressed" (Berg, 1971). Explicit knowledge is communicated using a formal language and structured procedures like manuals, books, policies, etc. The challenge of knowledge management is to transform tacit knowledge into explicit knowledge in order to make it available for use by others (King, 2009).

There are three stages or generations of knowledge management (KM): The first stage is based on organizational memory, information sharing, and effective

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communication. The second stage is focused on organizational change through tacit knowledge and collective learning. The third stage establishes the link between knowing and action based on managing uncertainty. Most INGOs have adopted the 'second generation' or stage approach focusing not only on the technology to develop an organizational memory but also on collective knowledge and applying Communities of Practice and networking.

 Communities of Practice (CoP) are formed by peer groups who work together and share their knowledge. Nevertheless, although they provide access to information does not mean that it will be used by others. Knowledge and experiences shared by individuals and their peers have value to the organization (Jennings, 2011). Therefore, the main problem of INGOs is the lack of a sound understanding of the essential factors that contribute to knowledge sharing within their organizations.

Other causes of the main problem are: INGOs invest in training their employees to increase their productivity in order to be prepared to solve problems and make better decisions. However, qualified and trained staff may leave the INGOs at any moment and take with them the accumulated knowledge that is part of the organization, which represents a waste of time and money as it hires new employees and trains them again. Leonard (2014) refers to knowledge hoarding as when individuals (technical or managerial) or experts keep their expertise to themselves. They may do this for several reasons: personal ego, financial incentives, frustration with the organization, or staff may be seeking to maintain or build power and control. These reasons constitute issues that managers can actually change.

Another major management problem is weakness in internal communication. The obstacle to knowledge sharing is when information does not flow evenly and often the data necessary to advance projects are kept in the hands of few people in the

organization. For example, criteria to multiply the benefits arise from public and / or private investment that contribute to improving the living conditions of populations at risk, may have not been considered or evaluated with indicators of qualitative and quantitative impact. As a result, the actions at the level of improvement of the living conditions of the population have not been significant in some cases.

The focus of developmental policies within the institutional framework necessary to address social problems and achieve a humane, sustainable and participatory development, also requires complementary actions in a management capacity (Flor, 2007). On the contrary, the lack of capacity and actions to implement these policies can lead to failure of the best intentions. These problems were identified based on the SWOT Analysis made for INGOs in Ecuador with a compilation of issues that these organizations currently face (see Appendix H). SWOT means strengths, weaknesses, opportunities and threats (Olsen, n.a.). SWOT analysis is a planning tool that allows knowledge of the current situation of INGOs internally and externally. Therefore, knowledge management is fundamental to improve the managerial capacity as well as the organizational management performance.

Conceptual Framework

The conceptual framework of this research focuses on capacity building, knowledge management, knowledge sharing, and power-knowledge relationships. Capacity building is related to community resiliency and social justice transformation. Social learning can increase organizational and community capacity, as well as advance social justice agendas (Isaac, 2012). Social learning can help to foster awareness of the skills and assets that an organization or a community actually have, as well as to prepare their members to face challenges to livelihood. Community resilience allows people to respond effectively when they are confronted with imperial assets, those that limit the

ability to actualize local capacity (Isaac, 2012). The common governance factors for adaptive capacity, resilience, adaptive governance, and adaptive management are: leadership, trust, commitment, experience, resources, networks and connectivity, predictability, flexibility, knowledge and information. These forms of adaptive capacity should create new options for the future to face challenges throughout transformative and adaptive responses (Hill, 2013). See Appendices A and B.

According to Isaac (2012), there are two kinds of capacity related to assets management for community-based organizations. The first is diagnostic capacity, which is done with community collaboration to enhance their expertise and also to identify social organizational, economic, and political capacity. The second, adaptive capacity, fosters community collective response when external conditions vary (Sussman, 2003). It is enabled by creative thinking and shaped by community needs. Yohe & Tol (2002) state that adaptive capacity has different determinants depending on its specific characteristics of system, sector, and location, such as: technological options available for adaptation, the availability and distribution of resources, the structure of critical institutions and the allocation of decision-making authority and their ability to manage information, human capital, social capital, and access to risk processes.

Knowledge Management (KM), since the 1980s has been spreading as an organizational practice; designed properly, it can manage human and technical resources (Drucker, 2012 & Senge, 2006). Other authors such as Nonaka & Takeuchi (1999) believe that companies must become creators of knowledge and learning instead on being only consumers of knowledge. Nonaka (1994) states that organizations must facilitate the access and retrieval of knowledge. There is a dimension where explicit knowledge exists by using written or coded formats, which allows it to be captured and

shared through information technology and for it to be documented and made public. Nonaka & Takeuchi (1999) also produced a theoretical leap in knowledge management conceived of as part of an epistemological theory with sociological consequences, which would furthermore be a limited contribution to organizational learning. The new challenge consists of rethinking KM as a production and dissemination of knowledge in modern societies (Gibbons et al., 1997). In recent years, the concept of KM has been enriched and transformed rapidly. Initially, concern about KM was understood to be related to private sector businesses, but over time, given the information needs of companies, it has been linked to the society of knowledge and information. The knowledge society transforms information into resources that facilitate taking effective action while the information society only creates and disseminates the raw data (Castelfranchi, 2007).

Knowledge Sharing, as a fundamental part of KM, brings many benefits to organizations because it: a) Speeds up response times. b) Leads to better decision making. c) Increases creativity and innovation. d) Checks the organizational climate. e) Preserves existing knowledge. f) Increases employees' commitment and empowerment throughout their feedback. g) Increases efficiency. However, lack of time or resources can constrain knowledge transfer (Ditrichova, 2015).

Some development organizations have incorporated "Knowledge Management" in their operations in order to avoid knowledge loss or data overload. Although, the role of KM has been limited in relation to development planning. Heizmann (2008) discusses shortcomings and constraints related to knowledge sharing based on the Foucauldian perspective about power/knowledge relations. Heizmann (2008) argues that this emerging socio-cultural perspective in the KM field can benefit INGOs. Foucault (1995) examines power and knowledge not as independent entities but as

inextricably related because knowledge creation and utilization are always an exercise of power and power is always a function of knowledge. Moreover, Foucault (1995) identified power/knowledge as a productive relation but also may be constraining, which can not only limit people's actions, but also creates new ways of acting and thinking about themselves.

Research Question

Within this background, Jennings (2011) claims that there are five factors that influence knowledge sharing: culture of origin, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, and media used for sharing information. On the other hand, Suveatwatanakul (2013) has identified eight variables or factors related to knowledge sharing: leadership, culture, mission and strategy, management practices, organizational structure, systems, organizational climate and motivation. Therefore, nine factors identified by Jennings (2011) and Suveatwatanakul (2013) were used as the initial factors and the starting point of this study and shown in Figure 2, which are: organizational culture, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, and media used for sharing information, mission and strategy, management practices, organizational structure, organizational climate and motivation.

These factors contribute to formulating the following research question in order to investigate if INGOs in Ecuador are influenced by the same factors for knowledge sharing. Figure 1 shows the Concept Map of the Research Question, which is related to the four main topics: capacity building, knowledge management, knowledge sharing and power-knowledge relationships.
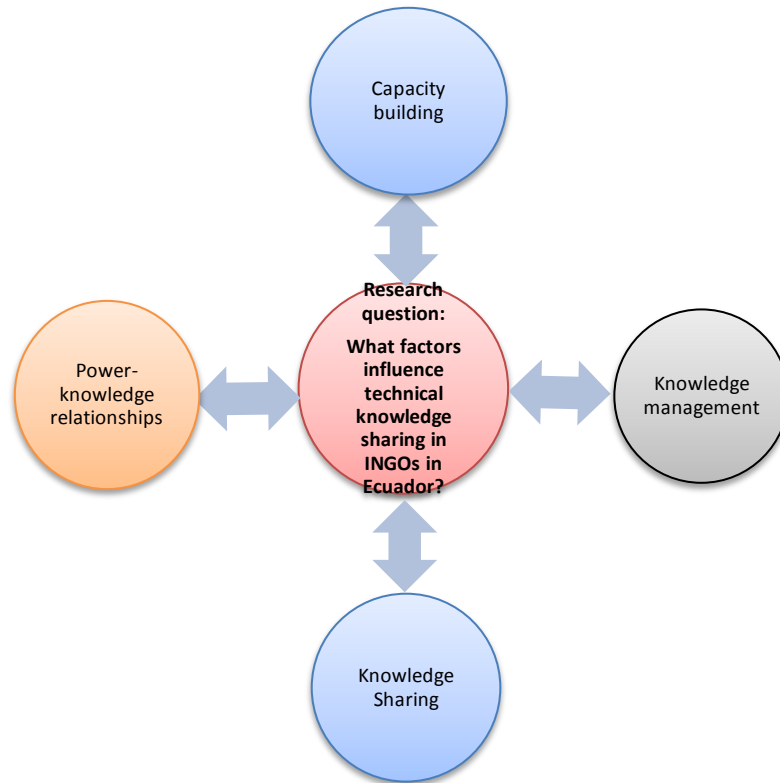
Figure 1. Concept Map of the Research Question
Source. Author

Figure 2. Factors investigated that influence knowledge sharing
Source. Author

The main research question is: What factors influence technical knowledge sharing in INGOs in Ecuador? Based on this question, the sub questions are (see Appendices L and M):

1. How does the organizational culture affect technical knowledge sharing?

2. How does staff's role within the organization facilitate technical knowledge sharing?

3. What type of procedures are in place to facilitate technical knowledge sharing within the organization?

4. Do employees value sharing knowledge within the organization?

5. What type of media supports the individuals sharing technical knowledge within the organization?

6. What kind of management practices support individuals sharing technical knowledge within the organization?

7. How does the structure of the organization support the knowledge sharing within the organization?

8. How does the mission of the organization facilitate sharing technical knowledge internally?

9. How does the strategy facilitate sharing knowledge internally?

10. How does organizational climate support knowledge sharing?

Methodology

The methodology consists of a qualitative design. This qualitative approach was used to collect data to answer the research question which allowed me to compare and contrast the findings of the four INGOs through triangulation in order to uncover patterns and generate conclusions. In-depth semi-structured open-ended interviews were carried out with participants at the managerial level in four INGOs located in

Quito, Ecuador. The International Cooperation (IC) prioritizes INGOs that align their activities with the objectives 1 to 4 of the Development National Plan (see Appendix I). Therefore, four INGOs were selected based on the alignment of their activities with the objectives 1, 2, 3, and/or 4 of Ecuador's Development National Plan (see Appendix I).

Significance

The significance of this study involves contributing to the field of community and regional planning (CRP) by filling the gap in the literature about the factors that influence knowledge sharing in order to determine how to strengthen capacity building in social organizations. It also has further implications for the fields of: a) Management, by assisting social organizations to consider specific factors when implementing a knowledge management system; b) Public Policy, in terms of how INGOs' internal policies of learning and sharing can allow them to comply with current governmental regulations about sharing information with their stakeholders (Dyer & Nobeoka, 2000); and c) Sociology, introducing a social perspective on how to improve knowledge sharing in order to create a learning organization.

Delimitations

This study was conducted with four INGOs located in Quito, the capital of Ecuador, previously selected, in order to know how they share knowledge internally and to identify the problems related to this process. The study uses a semi-structure qualitative approach by conducting in-depth interviews to gather perceptions, feelings and opinions of the participants. The results of the study are transferable by inviting readers to make connections between the factors that influence knowledge sharing in INGOs and their own organization. Therefore, it will be applicable in similar contexts.

Limitations

The limitations include: access to INGO information is limited by the Ecuadorian government decentralization of INGO management to public institutions. Some INGOs refuse delivery of this information by claiming that it is private, though that is counter to the government's regulation about open public information. Also, in some cases, the INGOs information is not up to date. Furthermore, this study is limited to INGOs and may not be applicable to other types of organizations.

Definitions of terms used in this study

The following definitions of terms provide specific descriptions of how these terms are used in the context of this research:

Capacity. Is a specific ability or resource that a person or organization has, and it can be measured in terms of quantity and quality of the resource over time (BusinessDictionary, 2017).

Capacity Building. It can be understood as the capabilities that an organization has related to the human, organizational, technological, scientific and institutional areas. It is associated to the organizational performance (Kolar, 2011).

Knowledge. Is the faculty or capacity of a person or an organization as a result of interpreting information that can lead to an effective action toward the community that serves (BusinessDictionary, 2017b).

Knowledge Management. Is the process of capturing, developing, sharing, and using organizational knowledge in an effective way (Girard, 2015).

Knowledge Sharing. Is the action to allow other people to access information and knowledge (Frost, 2017).

Technical Knowledge Sharing. It focuses in the action of sharing only knowledge related to the main activities developed by the organization (for example, projects). It

does not include other activities related to other fields (for instance, administrative or financial).

NGO. Non-Governmental Organization (NGO), also called as civil society organization, raises its funds by the government and maintains a non-governmental position, but it does not need a council or a board of directors. INGO is an International Non-Governmental Organization (Odeh, 2015).

NPO. The Non-Profit Organization (NPO) does not share its funds with shareholders or with the owners of the organization, but uses them only for its own social purpose, for example: charitable organizations, public arts organizations, and trade unions (Odeh, 2015).

Organizational Learning. Is a continuous process that shares, integrates and interprets new knowledge that enhances its collective ability to accept and adapt to internal and external change, and leads to collective action (Learning Matters, 2017).

Social Learning. Is a process in which individuals modify their own behavior based on the observation of the behavior of others and its consequences (BusinessDictionary, 2017d).

Technical Knowledge. It is related to all project activities that INGO performs, which includes development strategies and specialized terms they use (UNDP, 2014).

In summary, this chapter addresses the need, the main problem that INGOs in Ecuador currently face, as well as the conceptual framework, methodology, significance, delimitations, limitations, and definition of terms that are used in this research.

CHAPTER 2

LITERATURE REVIEW

This chapter addresses the literature review consisting of these components: capacity building, capacity building models, the learning organization, knowledge management focusing on knowledge sharing, knowledge management in Ecuador, INGOs in Ecuador and their SWOT analysis, as well as a summary of the qualitative methodology that was used in this research. See Figure 3.
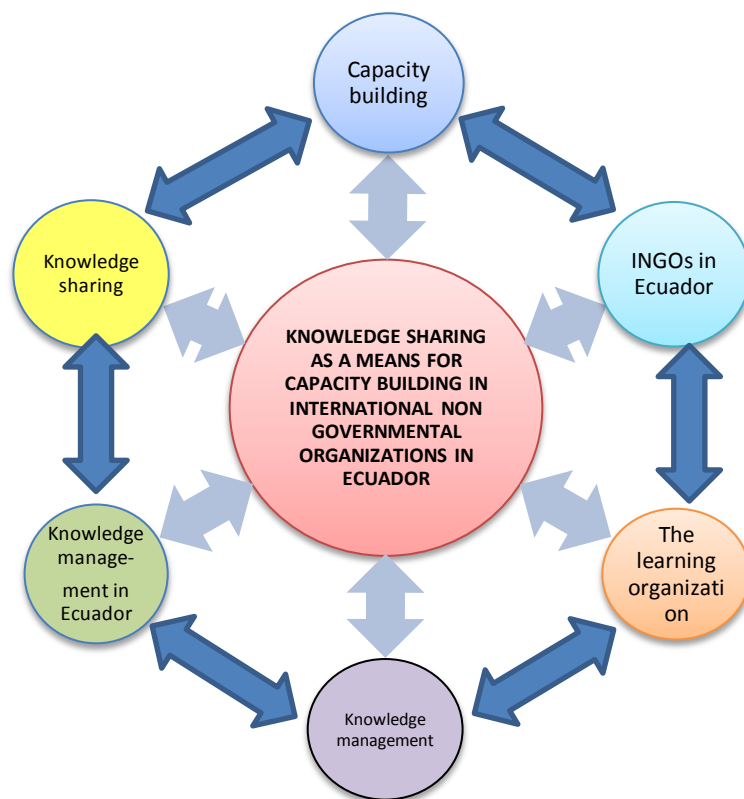
Figure 3. Concept Map of the Literature Review
Source. Author

Capacity Building

In the modern world, capacity is as important as the ability to govern, which can be understood as exercising executive power, while sovereignty can be understood as the supreme authority, and self-determination is related to people's freedom to make their own choices. Building capacity to increase the skills of people that participate in

governance and their ability to self-govern is called human capacity (Lane & Wolf, 1990). On the other hand, conflicts and crisis can lead to institutions being seen as ineffective. Organizational capacity building has the goal to strengthen, not only to increase job skills, but also to improve the coordinated use of those skills to the benefit of the organization. Networks are a mechanism that allows members of the organization to interact with each other and institutionalize the learning experience. Besides the human capital that employees bring with them to the job, it is also important to train staff as an essential condition for success. Individual capacity development should be encouraged as it leads to institutional strengthening and increases organizational effectiveness due to the individual as an agent of change within their organization. Capacity building can be understood as the action of building effectiveness, allowing an organization to develop the capacities such as infrastructure, operations, financial health, and programs. It includes also the outcomes as a result of focusing in effectiveness. According to Grantcraft (2015), capacity building occurs when a Non-Profit Organization invests in its effectiveness and future sustainability. Capacity building results in developing competencies and skills that organizations need to be more effective and sustainable, especially in their potential to solve problems and to enrich lives of society.

Therefore, capacity building is understood as the "process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in the fast-changing world." (Rengasamy, 2015). Another definition is capacity building results in "actions that improve nonprofit effectiveness" (Rengasamy, 2015). An effective NGO as a whole organization is responsive to people's needs. Other scholars argue that capacity building refers to actions that bring the organization to achieve its own mission. These

concepts are similar to the ideas of organizational development, organizational effectiveness and organizational performance management in companies. However, there are also many other approaches to building capacity, such as: granting management development/operating funds, providing training/development sessions, coaching/ collaborating with other non-profit organizations (NPOs), among others. Moreover, each day more for-profit companies are including methods of organizational performance management about capacity building, such as: organizational learning, the Balanced Scorecard (a strategic planning and management system), principles of organizational change, cultural change, etc. (Rengasamy, 2015).

A capacity building process allows organizations to increase the level of human, technical, financial, and physical resources in order to provide better services, as well as to increase efficiency by optimizing the use of resources and reducing the cost of services, and lastly to increase effectiveness by achieving the objectives of the organization. This has become an important issue among NGOs and other organizations including associations, training centers, funders, consultants, etc. Capacity building involves building skills and abilities such as policy-formulation, decision making, appraisal, and learning. It also includes mission and strategy formulation, leadership, administration, fund-raising, diversity, governance, positioning, planning, marketing, program development, advocacy, partnerships, implementation, evaluation, and policy change, etc. See Appendix F: A framework for addressing nonprofit capacity building.

Capacity building enables developing nations to be more independent of international aid which can help development, progress and reform. Some ways to build capacity are: fundraising, training centers, learning centers and consultants, job training, exposure visit, office and documentation support, among others. For example, the United Nations Development Programme (UNDP) is one institution that has helped

to build capacity since 1970, by offering guidance to staff and governments on this matter. In contrast, capacity building can be seen in terms of reclaiming sovereignty, self-determination, and self-direction (Isaac, 2012). Some INGOs organize workshops about these topics with the communities they serve. Sovereignty or self-government is related to self-limitation (which means limiting oneself) rather than to self-direction which is the establishment of autonomous political goals. Self-limitation provides a new insight about how the self-controlled sovereign State may limit itself (Fouillee, 1889). Autonomy is a precondition of security practices, not its goal. Also, usually people with critical knowledge will try to protect it as if it were their own property (Amble, 2006); therefore, knowledge hoarding focuses on security goals.

There are two forms of capacity building. The first is community capacity building. The capabilities that community capacity building use are: human, technological, scientific, organizational, resource, and institutional. Its goal is to use the potential, limits and needs of the people affected in order to solve problems related to policy and methods of development. It takes place on an individual level, an institutional level and the societal level (UNDP, 2016). The individual level helps individual participants to build and enhance knowledge and skills, learn and adapt to change, under certain conditions. The institutional level aids institutions in developing countries by supporting them in formulating policies, and improving their organizational structures, and management methods, which is the case of INGOs in Ecuador. The societal level is used to develop public administrators to be responsive and accountable (Committee of Experts on Public Administration, 2006). The second form of capacity building is organizational capacity building which focuses on developing capacity especially in non-governmental organizations (NGOs). This form of capacity building emphasizes in improving the organization's abilities to perform specific activities, such as strategic

planning, program design and evaluation, leadership and board development, financial planning and management, among others (Martinelli, 2016). It also develops the NGO internally in order to fulfill their mission and objectives (Eade, 2005).

Capacity Building Models

Among the existent capacity building models, two models were analyzed based on their approach. The first model is the single-loop and double loop learning (see Appendix I) by Argyris & Schon (1978), which is a significant contribution to organizational learning systems and is useful to understand experiential learning. The second model is for capacity building by De Vita & Fleming (2001), researchers at the Urban Institute, which is based on topics of civil society, sustainable development, and organizational management to demonstrate how nonprofit capacity is related to community capacity (see Appendix F).

Single-loop and double-loop learning

Schön (1983) argues that managers can be divided in two groups. In the first group the manager is viewed as a technician who solves routine problems by applying methods based on management science, and in the second the manager is a craftsman who makes his decisions not based on techniques but on intuition. Managers are very sensitive to uncertainty, change and uniqueness, causing them to be reflective. Moreover, management is considered an art, as it involves intuitive judgement and skill so the manager can critically examine, restructure and test any problem or phenomenon.

According to Argyris & Schön (1974), people know how to act in some situations using mental maps. In this way, they plan, implement and review their actions. Even more, they separate theory and action. A theory of action is "Its most general properties are properties that all theories share, and the most general criteria that apply to it – such as generality, centrality and simplicity – are criteria applied to all theories" (Argyris &

Schön, 1974). These authors state that there are two theories of action involved (see Appendix J). The first theory refers to what they do as practitioners (theories-in-use) to govern actual behavior and tend to be tacit structures. The second theory is related to how they speak of our actions to others (espoused theories) and it is used to convey what they do or what they would like others to think they do. These authors also established four elements. One is governing variables when people act within acceptable limits, but any action can trigger a trade-off among governing variables. Another is action strategies, when people act to keep their governing values within the acceptable range. A third is consequences when people have a result of their action for themselves or others (Anderson, 1997).

The single and double-loop learning model is used to explain two responses when intention and outcome mismatch, and goals, values, plans and rules are operationalized rather than questioned, because they are taken for granted (Single-loop). In this way, observing the governing variables produce a learning that leads to an alteration in the governing variables, so there is a shift in the way strategies and consequences are framed. Double-loop learning happens when norms, policies and objectives are modified if an error is detected and corrected. Moreover, Argyris & Schön (1974) describe as Model I the double-loop learning and Model II when the governing values associated with theories in-use enhance double-loop learning.

A Model for Nonprofit Capacity Building

The nonprofit sector is complex and includes many interests and activities such as employment and training centers, hospitals and universities, museums, child care centers, dance theaters, food banks, art galleries, youth development programs, animal shelters, drug treatment and prevention centers, among others. Some NPOs are large, multi-service and multi-project, while others are small, with only one project. For this

reason, their needs and ability to build future capacity varies among them. Capacity building is not an easy nor simple process (De Vita & Fleming, 2001).

This model serves as a guide in the development of intervention strategies. It uses five components vision and mission, leadership, resources, outreach, and products and services. Mission and strategy is one of the nine factors investigated in this study that might influence in knowledge sharing. These components are common in all NGOs, NPOs and are interrelated and mutually dependent on each other as a system. Organizations may use one component more than others, but it is necessary for an organization to address all five components. Each component represents a possible intervention point for enhancing organizational capacity (see Appendix K).

INGOs in Ecuador

INGOs in Ecuador are affected by the socio-economic realities of this country that create barriers to INGO performance and generate a need for more effectiveness in this sector. For example, there is almost 50% unemployment or underemployment, and 28.6% of people live below the poverty line in Ecuador. Since 2000, after dollarization, the cost of living drastically increased, and the per capita GNP (Gross National Product) and the GDP (Gross Domestic Product) decreased. Besides, the government has used half of the nation's resources to pay the interest of its $12 billion external debt often called 'eternal debt'. The government is not able to maintain a social welfare infrastructure because its role in the economy has diminished due to neoliberal measures that have been implemented. Although the GNP and GDP have improved in the last decade which has increased the funds available for social programs, the poverty in the country has not been alleviated (Dirección de Estadística Económica, 2011).

In the context of economic hardship and the lack of governmental assistance, most INGOs have been working to help the nation get by through focusing their efforts in

three areas: meeting the basic needs of minorities, promoting sustainable development and protecting the natural resources from exploitation (Ecuador Explorer, 2016).

According to the Technical Secretariat for International Cooperation (SETECI), INGOs, especially European organizations, are helping to strengthen the work of the Government in key sectors for development, to benefit the sectors in need and to support an integral planning project. In this process the INGOs of neighboring countries also participate, in order to promote the participation of society. "Here we gain both sectors, for us (the Government) it is important that there is transparency, in turn they (INGOs) have an opportunity for their actions to be made visible and empowered." The purpose is to plan collaboration for social development projects, as well as to enhance the market and human talent, in accordance with the National Plan for Good Living. In addition, the government made Decentralized Autonomous Governments (GDAs) responsible for managing international cooperation, with the aim of promoting the development of their jurisdiction, and planning and integrating the provincial and national processes (El Ciudadano, 2013).

SWOT Analysis

In addition, a SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis of the Ecuadorian INGO sector is shown in Table 1. In this table, strengths and weaknesses are the internal forces of the organization, and opportunities and threats are the external forces (Olsen, n/a). This analysis was helpful to identify the INGOs problems as well as it is useful to elaborate further recommendations on future organizational direction. Next, a brief summary of the main aspects included in Table 1 (SWOT), is provided:

Strengths. INGOs are willing and motivated to defend and support their social causes based on their experience, knowledge and teamwork.

Weaknesses. There is limited human and economic resources, little experience with fundraising and other forms of generating incomes, competition with other INGOs for funding as well as for serving the same communities, limited technical capacity due to the tendency to cover all kinds of problems with certain superficiality, little technical training to local teams, there is no transfer of skills management to target communities, INGOs often fulfill the role of technical employment agencies instead of community capacity generation, staff shortages, and negative public image perceived of some INGOs.

Opportunities. Ability to serve in places where the state has limited resources located in different geographic areas, collaborative partnerships with other INGOs and NPOs and coalitions in the community, and INGOs are in a process of alignment in order to comply with and implement the National Plan for Good Living (NPGL) 2017 – 2021.

Threats. Absence of specific legislation for INGOs, highly restrictive regulations that increase the perception that the actions of INGOs are produced at its discretion and without complying to Ecuadorian legal framework, policies imposed by the government, the Ordinance 22 restricts foreign NGOs to route international cooperation towards achieving the objectives outlined in the NPGL, also 26 foreign NGOs were suspended for failing to provide documentation to the government, in accordance with the Executive Order 812 of July 5, 2011, and limited public investment and economic growth.

In addition, there are other problems that are related to the topic investigated in this study. For example, according to the Ecuadorian government, both the Organic Law on Communication and the Presidential Decree on NGOs were compatible with international human rights law. However, both have been widely criticized in the

international arena due to the government's censorship of many communication media for not covering political issues considered by the government to be of "public interest", which significantly limits freedom of expression of the Ecuadorians. This authoritarianism decreases the efficiency of the state by relying on a single authority and losing the freedom of expression wanting to criticize or issue ideas. Finally, knowledge hoarding and weakness in internal communication in some organizations might restrict knowledge sharing in INGOs internally and externally.

Table 1. SWOT Analysis of International Non-Governmental Organizations (INGOs)

STRENGTHS	OPORTUNITIES
Knowledge and experience on the field that the NGO serves the community.	Support of international cooperation to finance projects.
Image, prestige and institutional experience.	Ability to serve in places where the state has limited resources.
Teamwork and stable working environment.	Expansion of programs throughout a geographic area.
Passion for the causes that NGOs defend and support.	Collaborative partnerships with other NGOs and NPOs and coalitions in the community.
Management with lower costs than the private sector.	In recent years, the Gross National Product (GNP) and Gross Domestic Product (GDP) have improved, as have funds available for governmental social programs. Nonetheless, the country's poor people still suffer.
Past success in accomplish projects' goals.	Initiatives of solidarity economy.
NGOs have an acceptable level of credibility.	The government has issued laws prohibiting the importation of certain items in order to protect the health of people and animals, as well as to protect and preserve vegetation. This has helped to protect and boost consumption and domestic product.
NGOs have clear job specialties.	Policies have been promoted business development with other countries, giving priority to those found within the region through cooperation in all areas that allow progress at country level. There is interest from different agencies in the region at different planning processes developed by Ecuador.
NGOs are more open to inter-institutional collaboration.	NGOs are in a process of alignment in order to comply with and implement the National Development Plan which is also called National Plan for Good Living 2017 - 2021. In addition, various public sector institutions are aligning and planning in order to comply with the public policy implemented by the government.
	Strengthening the decentralization of various government entities by creating autonomous governments (GDAs).
	Investment in education is one of the most important areas of government, as it has allowed and facilitated to access educational loans and scholarships given to both professionals and students so they can train and study at the best universities in the world.
	Improving tax revenues by implementing a tax policy that allows better collection. Wealth is concentrated in fewer and fewer people and the poor increasingly have greater participation in the distribution of wealth.

STRENGTHS	OPORTUNITIES
	Environmental, economic, cultural and social heterogeneity of rural territories, the diversity of ecosystems and forms of rural production, forced to create differentiated policies that link the various sectoral programs with government policies, to the extent permitted an innovative cross-sector management, democratic participation and consensus that allow for changes in production and energy matrix.
	Regarding multiculturalism and ancestral knowledge, these are promoted by the government. It ensures the right to education, and communication transmission, useful for the common good of all citizens. Investment in education is one of the most important areas of government since it enables better development of the country. This has been achieved by creating educational and emblematic units of the millennium, allowing citizens access to information technology.
	Strengthening the Peasant Family Farming in the development of rural solidarity economies, redistribution of productive assets, technology innovation, has led to an increase in productivity in rural areas, and increase employment in non-agricultural activities.
	In order to achieve the objectives set out in the NPGL, program planning helps establish public policies in the short, medium and long term, while it serves as the bridge to articulate the strategic level with the executing state level. It has a methodology to evaluate the design, implementation, implementation, and effects that have policies, programs and public projects. It has developed a methodological guide for the formulation of goals and indicators for the Development Plans and Land Management.
	Automation tools and the use of new methodologies are helping to meet the different institutional powers. The National Information System that is sustained in the National Plan for Good Living (NPGL), aims to collect, store and transform data into information that help in decision-making in development planning and public finances as well as allowing public access to all information. The plan has helped to reduce inequality in the country, as well as the poor are getting closer out of poverty by giving them to obtain credit facilities for either business or home.
	The commitment that the government has given the risk management has been essential to reduce the vulnerability of the population and ensure risk management that allows not only manage the prevention, mitigation and disaster recovery, but also an improvement in social, economic and environmental conditions, all contained in what is known as the Integral Security.

WEAKNESSES	THREATS
Limited human resources such as staff and volunteers in INGOs.	Highly restrictive regulations that increase the perception that the actions of NGOs are produced at its discretion and without complying to Ecuadorian legal framework.
Limited experience with fundraising and other forms to generate incomes.	Absence of specific legislation for NGOs.
The government's economic policy requires active participation of private investment, but because of the mistrust of a series of laws that have been enacted and bad management of foreign trade, this has not been possible.	Policies imposed by the government.
Structural policies related to the rural sector suffer of many shortcomings, which are fragmented and weak, resulting in that it cannot achieve sustainable development both people and territories planted in the NPGRL (National Plan for Good Rural Living).	26 foreign NGOs suspended for failing to provide documentation to the government, in accordance with the Executive Order 812 of July 5, 2011.
Lack of relationships with the local businesses and civic community.	The Ordinance 22 restricts foreign NGOs to route international cooperation towards achieving the objectives outlined in the National Plan for Good Living.
Competition with other NGOs, NPOs, and coalitions for funding.	Half of the Ecuadorian population remains unemployed or underemployed, while 28.6% of the nation lives under the poverty line.
Competition with other NGOs to deliver programs and services to target population groups.	Just after dollarization, the cost of living drastically rose, and the per capita GNP and the GDP decreased, bringing more hardship and suffering.
The implementation of policies related to social and solidarity economy and food sovereignty have not yielded the expected results in relation to the generation of new livelihood and has not worked on a good agrarian reform that allows a better land distribution.	With neoliberal measures steadily diminishing the State's role in the economy as well as its ability to maintain any kind of social welfare infrastructure, and with the government dedicating roughly half of the nation's resources to keeping up with interest payments on its $12 billion external debt, Ecuador was unable to count on the State to act as a benefactor.
The eradication of illiteracy in the 'montubia' and black ethnic groups has not been met, as well as access to secondary education, this due to the little attention that has been given by the bodies responsible for them.	The presence of several ideologies which seek to impose economic and political criteria, have already failed. The authoritarianism decreases the efficiency of the state by relying on a single authority and losing the freedom of expression wanting to criticize or issue ideas.
Limited technical capacity due to the tendency to cover all kinds of problems with certain superficiality and this impede to achieve levels of specialization in specific elements necessary for development.	The economic structure of the country has focused on oil revenues which produce more than 50% of state revenues, and help funding public spending, such as external debt, high subsidies as the bonus poverty, human development bonus, and fuel. But with the fall in international oil prices, this has led to an economic debacle at the country level, as it has limited public investment and economic growth.
There is a little technical training to local teams and usually there is no transfer of skills management to target communities. NGOs often fulfill the role of technical employment agencies instead of community capacity generation.	The various instances of the state have not complied with the processes of national and territorial planning.

WEAKNESSES	THREATS
Insufficient economic resources, generating instability in NGOs projects.	The continuous change of management and technical staff in different government entities have not followed paths plans due to resources are spent on staff training and advice.
Limited own resources.	There is a weak communication between the different ministries and government agencies, which affects compliance and correct application of the proposed processes.
Difficulties in obtaining local and foreign funds.	Insufficient technical capacity by governmental decentralized agencies (GDAs) and other institutions, when entering information in various computer systems that allow assess and monitor compliance with the National Development Plan.
Some NGOs do not have a gender approach.	The expansion of arable areas without any technical advice is putting the future of coming generations in rural areas at risk.
Staff shortages.	Occurrences of nature to which the country is exposed, such as volcanic eruptions, earthquakes, 'el Niño' and 'la Niña' phenomenon, the watering places, are some of the main causes that hinder economic development of the nation.
Work overload in managers and in a few people.	Increasing use of fines and lawsuits by the government against independent media, restrictions on social media, and ongoing attacks on journalists. Lack of judicial independence leaves journalists and media outlets with no recourse.
Absence of internal policies of training and personnel development.	Rural areas of the country do not have the necessary support by the different state agencies, which has meant that there is a high level of poverty among rural communities.
Absence of systematizing processes.	GDAs are in charge of international cooperation management which might constraint INGOs participation in development projects.
Absence of mechanisms and assessment tools for projects, staff, and organizational.	
Insufficient monitoring of programs and projects in execution, which affects organizational management.	
Negative public image perceived of some INGOs.	
Knowledge hoarding due to individuals (technical or managerial) or experts keep their expertise to themselves.	
Weakness in internal communication in some organizations.	

Sources: National Plan for Good Living (NPGL), Final Report of accountability matrix analysis and Chakana magazine
Prepared by the author

The learning organization

The learning organization is focused on individual and group learning. It transforms new knowledge into actions based on a continuous learning and improvement. An organization that acquires knowledge and innovates fast enough, is able to survive and thrive in a rapidly changing environment. It creates a culture of critical thinking, new ideas contribution, learning from experience and experiment, and shares the new knowledge generated throughout the organization (Frost, 2010). This term is different than organizational learning. According to (Senge, 2006a), the learning organization involves the ideal organizational environment for learning, knowledge management (KM), innovation, etc. The learning organization depends on the following five factors: systems thinking, personal mastery, mental models, building shared vision, and team learning. "Organizational learning means the process of improving actions through better knowledge and understanding." (Fiol & Lyles, 1985).

Thorpe (2012) claims that building knowledge capacity is one of the four ways of that knowledge management (KM), which means building the organizational capacity to generate, acquire, share and use knowledge in an effective manner. The other three ways of KM are: a) Internal knowledge management by giving the organization's staff access to knowledge that helps them to improve their job as well as the organizational performance throughout tools and approaches, such as databases of research, communities of practice, intranets, toolkits, lessons learned, knowledge sharing events, among others. b) Knowledge dissemination in order to make the organizational knowledge available, accessible, and used as possible. c) Knowledge brokering by connecting development partners with the knowledge they need not only from within their organization and from other organizations.

Knowledge management

Some definitions of knowledge are: a) According to Webster's Dictionary (2016), knowledge is "the fact or condition of knowing something with familiarity gained through experience or association. The act or state of knowing, clear perception of fact, truth, or duty, or cognition. That which is gained and preserved by knowing, instruction, acquaintance, enlightenment, learning, erudition." b) Denning (2001) claims that knowledge is "the ideas or understandings which an entity possesses that are used to take effective action to achieve the entity's goal(s). This knowledge is specific to the entity which created it." Knowledge is the result of learning or understanding. c) Fleming (1996) has traced knowledge from data transformed into information (see Figure 4).

Tuomi (2014) expresses that it is widely accepted that knowledge is a key generator of value in any organization. Then, what is the value of knowledge? It is difficult to answer this question due to knowledge has no intrinsic value per se. The value of knowledge is given by a complex social system of activity that creates value using knowledge. Likewise, knowledge is transformed into value at a later time. For example, before the computer age, the knowledge about how to make computer had no worth. Therefore, the value of knowledge is not easily estimated as knowledge simultaneously underlies the social division of labor, enables effective action, and is the basis from which value is perceived.
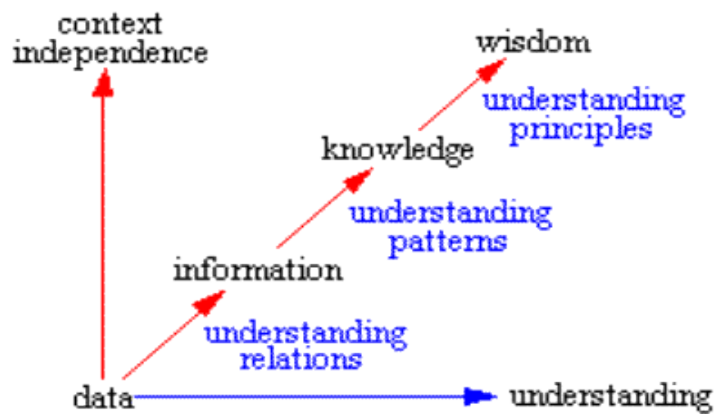
There are two types of knowledge: tacit knowledge ("know how") that is unique to each person and difficult to communicate to others, and explicit knowledge (formal) that can be easily transmitted by individuals or the organization. In other words, it is important that the person who first acquires the knowledge is empowered, has the necessary experience, and later transmits the knowledge in order to make it explicit. When tacit knowledge is transferred from person to person, or within a group within the organization, tacit knowledge becomes explicit knowledge, and thus makes the knowledge that was the domain of a person now the domain of the organization. This is also used to translate schemes, rules and operating procedures (García, 2015). See Appendix C: Tacit Knowledge and Explicit Knowledge.

However, knowledge management is ambiguous about the value of specific forms of knowledge that is relative and involves the generation of new ideas. Even more, the commodification of knowledge is a threat for KM because intellectual property rights can limit the access to that knowledge and create difficult partnerships and constrains collaboration among organizations. In addition, KM provides a view that it can be

easily managed by acquiring, sharing, storing, retrieving and using knowledge, without recognizing that KM can become an end in itself instead of enabling organizational learning. See Appendix D, process of knowledge (Britton, 2005).

Knowledge Management in Ecuador

Knowledge management can be applied to INGOs established in Ecuador in order to build their organizational capacity. The Republic of Ecuador is located on the northwestern coast of South America, in the torrid zone of the Americas. The mainland is located between parallels 01° 30'N and 03° 23.5 'S and the meridians 75° 12' W and 81° 00 'W. The national territory crosses the equator just 22 km to the north of Quito, which is its capital. It is a continental country with maritime dominance, but with a development of more than 1200 kilometers of coastline, without the Galapagos Archipelago and continental islands (Inocar, 2012). Ecuador limits are to the north with Colombia, the south and east with Peru and to the west the Pacific Ocean. Its continental length is 262,826 km^2 and 7,844 km2 island region. It has four natural regions, which are *Litoral 'Costa'* region, *Interandina or 'Sierra'* region, the eastern region or *'Oriente'*, and the *Insular* region or 'Galapagos' Islands. In addition, it has a presence in the Antarctic continent. See Figure 5.

Figure 5. Map of Ecuador
Note. Retrieved from "Ecuador's map", July 31, 2016. Retrieved from
http://www.ecuador.us/info/map.htm

In Ecuador, there are companies and organizations that are interested in issues related to knowledge management, including NGOs, which participated in the First International Forum of the Union of Nations of South America (UNASUR), held in the Imbabura province in 2014. The topic of the forum was "knowledge management in the framework of regional integration, challenges and scope". The event, organized by the South American Council of Science, Technology and Innovation of UNASUR (COSUCTI) and the Ministry of Higher Education, Science, Technology and Innovation (SENESCYT), sought to establish an effective dialogue on knowledge management, in view of progress in the construction of policies and mechanisms to facilitate cooperation among member countries (El Comercio, 2014). "Technology production is important, but more important is the transmission of this knowledge that allows us to create a culture of entrepreneurship and innovative capacity among

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citizens" (El Comercio, 2014). The main goal is to find a way to identify the methods and tools used by each of the members in the dissemination and transmission of knowledge.

Among other sectors, projects have been implemented to allow alternative technology solutions that strengthen and increase production levels and productivity throughout the food chain, as contributing factors to the dynamics of the Ecuadorian agriculture-productive matrix. This fulfills the objectives of the National Plan for Good Living, which are aligned with the Millennium Development Goals. The Ecuadorian government created the Ministry of Coordinator Knowledge and Human Talent, whose vision for 2017 is to promote the integral development of knowledge and human talent, looking for ways to strengthen the capacities of each individual, always attached to the National Plan for Good Living. One of the greatest achievements is the creation of the City of Knowledge known as 'Yachay', which aims to combine the best ideas from human talent, along with technology, and transform it into knowledge, thereby seeking to achieve the goals of Good Living.

Knowledge sharing

Hsu (2008) defines Organizational Knowledge Sharing as the backbone of Organizational Learning which has many benefits to an organization. Nevertheless, it is important to consider that knowledge sharing can be perceived by the knowledge contributor as difficult due to the costs. According to Kankanhalli, Tan, & Wei (2005), there are two types of costs. First, Nonaka & Takeuchi (1995) state that it is necessary to codify tacit knowledge before it can be transferred to others which takes time and resources. Second, the knowledge contributor in an organization has an opportunity cost due that he has to give up the potential rewards for performing other activities in

order to engage in knowledge sharing (Molm, 1997). Therefore, if the opportunity cost be minimized, then employee knowledge sharing would be possible.

Jennings (2011) claims that there are five factors that influence knowledge sharing: culture of origin, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, and media used for sharing information. On the other hand, Suveatwatanakul (2013) has identified eight variables or factors related to knowledge sharing: leadership, culture, mission and strategy, management practices, organizational structure, systems, organizational climate and motivation. The factors identified by Jennings (2011) and Suveatwatanakul (2013) were used as the initial factors and the starting point of this study, and they contributed to formulating the research question in order to investigate if INGOs in Ecuador are influenced by the same factors for knowledge sharing.

According to Jennings (2011), knowledge sharing application can benefit the individual as well as the organization when individuals find value in their use, which is a key factor for its success and contribution to the organization. Each day individuals value meaningful knowledge resources which become meaningful when they are used. However, employees should be encouraged to not only to share knowledge, but also to capture, document their work, and share documentation as well. Sharing knowledge can affect one's sense of personal responsibility. Thus, it depends of the individual if he/she will share his/her knowledge or not. Nevertheless, employees can be motivated by the organization to participate in knowledge sharing throughout acknowledgement and recognition of their contributions. This research aims to study factors that may affect individuals' willingness to participate in knowledge sharing. However, there is still reluctance by many employees to share their knowledge and build a learning organization although the given benefits of knowledge sharing and management within

organizations. Based on the literature review, there are many factors that influence how individuals work together, as well as how they communicate and share their knowledge within an organization. From this literature, nine factors were identified to have an effect on knowledge sharing: culture of origin, role in organization, procedures for managing knowledge, perceived value of knowledge, media used for interaction, mission and strategy, management practices, organizational structure, organizational climate and motivation.

In summary, INGOs have focused their efforts in three areas: meeting the basic needs of minorities, promoting sustainable development and protecting the natural resources from exploitation (Ecuador Explorer, 2016). However, it is necessary that their efforts align and help implementing both the National Development Plan and the National Plan for Good Living. In addition, Eade (1997) argues that organizational capacity building focuses on developing the INGOs capacities in order to be better equipped to accomplish their missions. In other words, capacity building aims to strengthen an organization's ability to perform its mission. When an organization fails in development, it means that the service promised was not delivered to the community. KM profoundly affects an INGO's work, leadership, and organization, to ensure that the organization is capable of fulfilling its mission and goals.

The next section addresses the methodology used by this research as well as the purposive sampling. The qualitative study was used to these four INGOs which followed a procedure with four steps to conduct this study: a) Four INGOs were selected based on the alignment of their activities with the four objectives of Ecuador's Development National Plan (see Appendix I). b) A qualitative study was conducted with these four INGOs using semi-structured interviews with in-depth open-ended questions for collecting data. c) The analysis and data triangulation were applied in

order to cross-validate data, analyze and interpret the data included in the Atlas.ti database in order to get findings and formulate conclusions.

CHAPTER 3

METHODOLOGY

Introduction

This chapter addresses the research question and sub questions, the design of this study, the participants of the four INGOs who are the purposive sampling, the procedure and instruments used, the data collections method to establish trustworthiness and data analysis. In addition, two capacity building models and one knowledge management model were used in Chapter 5 – Discussion to contribute to explain the findings: The first is the single-loop and double loop learning model by Argyris & Schon (1978) and the second is the capacity building model by De Vita & Fleming (2001). In addition, the SECI (Socialization, Externalization, Combination, Internalization) model of knowledge generation (Nonaka & Takeuchi, 1995) was analyzed. These models will provide means to understand the application of results to the larger context.

Research question

The main research question is: What factors influence technical knowledge sharing in INGOs in Ecuador? Based on this question, the sub questions are (see Appendices L and M):

1. How does the organizational culture affect technical knowledge sharing?

2. How does staff's role within the organization facilitates technical knowledge sharing?

3. What type of procedures are in place to facilitate technical knowledge sharing within the organization?

4. Do employees value sharing knowledge within the organization?

5. What type of media supports the individuals' sharing technical knowledge within the organization?

6. What kind of management practices support individuals' sharing technical knowledge within the organization?

7. How does the structure of the organization support the knowledge sharing within the organization?

8. How does the mission of the organization facilitate sharing technical knowledge internally?

9. How does the strategy facilitate to share knowledge internally?

10. How does organizational climate support knowledge sharing?

Design

The methodology used was a qualitative semi-structured study which provides a better understanding of the problem identified in INGOs. This is possible throughout exploring the research question which means by exploring the factors that enable knowledge sharing. In this way, this qualitative study can be conducted as methodically possible. Some benefits of this methodology are: adaptability and flexibility for changes, prepare the groundwork for future studies, and save time and resources by identifying the initial research intended to pursuing.

Denzin & Lincoln (2005) define qualitative research as "… an interpretive naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them."

According to Yardley (2007), the difference between the purposes of qualitative and quantitative studies are:

"Quantitative studies ... ensure the 'horizontal generalization' of their findings across research settings ... qualitative researchers aspire instead to ... 'vertical

generalization', i.e., an endeavor to link the particular to the abstract and to the work of others".

The interview is done verbally (Ritchie, Lewis, McNaughton, & Ormston, 2013 and Gillham, 2001) and it depends on the communication skills of the interviewer (Clough & Nutbrown, 2012) to structure questions (Cohen, Manion, & Morrison, 2011) and motivate the respondent to talk freely (Clough & Nutbrown, 2012). The interview can be classified in unstructured and structured. The former is closer to observation, while the latter uses a questionnaire with closed questions. This study used semi-structured interviews, which included mostly open-ended questions.

Participants

Until April 22, 2015, 118 active INGOs were registered in the Secretaría Técnica de Cooperación Internacional – SETECI, in Ecuador, which is the population of this study (SETECI, 2015). The purposive sample size includes four INGOS that are located in Quito, capital of Ecuador. The participants of this study are four directors and five coordinators from the four INGOs located in Ecuador due to their contributions to this study. These four INGOs were contacted by telephone, email and asked to collaborate with this study. The four INGOs were named as INGO-1, INGO-2, INGO-3 and INGO-4 by using surnames to protect their confidentiality. The permission to conduct research (the consent form) was provided to those who volunteer to participate in this study.

Dudovskiy (2016) defines the purposive sampling as a technique for selecting units of population to participate in the study using the researcher's own judgment. It is also known as judgment, subjective or selective sampling.

Black (2010) claims that purposive sampling is "a non-probability sampling method and it occurs when elements selected for the sample are chosen by the judgment

of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money."

Dudovskiy (2016) states that purposive sampling method is applied only with limited units which can serve as primary data sources. In this way, objectives may prove to be effective due to the nature of research design. This method has some advantages, such as having a good cost-effective and time-effective relation. It is used when there is a limited number of units available. It can also be used in anthropological studies that require an intuitive approach.

This method has also some disadvantages, such as: difficulty to generalize research findings, errors in judgment by researcher, high levels of bias, and low level of reliability. There are limits to generalization beyond the selection criteria for purposeful sampling, but a purposeful sample can generate limited general knowledge about other participants who meet similar criteria.

Procedure

A qualitative approach was used in the following three steps in order to collect data to answer the research question and related sub questions:

Selection of participants

Four INGOs were selected based on the alignment of their activities with the four objectives of Ecuador's Development National Plan (see Appendix I), which are: 1) To foster social and territorial equality, cohesion, and integration with diversity. 2) To improve the citizens' capabilities and potentialities. 3) To improve the quality of life of the population. 4) To guarantee the rights of nature and promote a healthy and sustainable environment. The International Cooperation (IC) prioritizes INGOs that align their activities with these four objectives described due to these objectives are the most priority for IC (see Appendix J). Appendix J was elaborated based on the

directory of INGOs (SETECI, 2015), the report of activities of INGOs (Dávalos & Rodríguez, 2010) and Ecuador's Development National Plan or DNP (Secretaría Nacional de Planificación y Desarrollo, 2007). The report of activities of INGOs include charts about the 10 main INGOs' intervention with the international cooperation aid in order to help to accomplish the objectives 1 to 4 of the DNP (Dávalos & Rodríguez, 2010).

The four INGOs were selected based on if they accomplish the objectives 1, 2, and 3, and they were contacted by email and telephone to make appointments in order to ask the directors in person to collaborate with this study. The permission to conduct the study (or consent form) was sent by email and delivered printed to the directors for their acceptance to participate in this study. When an INGO did not accept to collaborate with this research, another INGO was selected based on if they accomplish the objectives 1, 2 or 2, 3 or 1, 4, which was contacted to ask its collaboration with this study. If any INGO had not accepted, another organization aligned with only one objective 1, 2, 3, or 4 would have been asked to participate; otherwise, other INGOs out of 118 that are not aligned to any of these objectives would have been contacted randomly and asked to participate in this study until four INGOs have accepted to collaborate with the research (see Appendix K).

Instrument: Interview Guide

A qualitative study was conducted with these four INGOs. The instrument that was used in the qualitative study is semi-structured interviews with in-depth open-ended questions for collecting data which were conducted in the native language of participants (Spanish). Interviews facilitate to capture important ideas and detailed opinions to answer the research question (Bryman & Bell, 2003). Semi-structured interviews use an interview guide (see Appendix K). In-depth open-ended questions

allow to capture rich and descriptive data about participants' behaviors, attitudes and perceptions. These interviews were carried out with four directors and five coordinators (9 respondents in total) of INGOs to determine the factors that influence knowledge sharing which were compared and contrasted in the discussion of the initial factors proposed by Jennings (2011) and by Suveatwatanakul (2013), in order to make conclusions.

Participants were given three options to answer the interview questions: by email, telephone or face-to-face. Respondents were encouraged to provide more important, valuable and detailed responses by asking in-depth open-ended questions (Kendall & Kendall, 2002). The author used an interview guide with a list of questions, topics and open-ended questions in a particular order (in Spanish) that were covered during each conversation which helped to answer the research question and sub-questions related to the factors under investigation (see Appendices K and O). Appendix L shows the questions that were used in the interviews to the Directors/Managers of INGOs. These questions were organized using the ORID method (Objective, Reflective, Interpretive, Decisional) technique by Spencer (1989), in order to review observations of the process, offer reflection and insights, and provide decisions as to its usefulness and applicability in the INGO context. After the interviews were done, a follow up email was sent to all participants asking them which of the nine factors investigated that influence knowledge sharing, in order to confirm and complete their responses.

Analysis and Triangulation

The analysis and data triangulation were applied in order to cross-validate data, analyze and interpret the data included in the Atlas.ti database. This technique allows the researcher to test the validity of this research as wells as to capture different dimensions of data using different perspectives.

Then, triangulation was useful to identify convergences and divergences by analyzing different subject positions of the participants. In this way, the factors and information collected from the four INGOs were validated and the qualitative results were corroborated. The data triangulation was used based on the participants' subjects' positions of the four INGOs as well as documents from the literature review. In-depth interviews were conducted with each of these four groups to gain insight into their perspectives on the factors that influence knowledge sharing. During the analysis stage, feedback from the participants was compared to determine convergences and divergences using the data triangulation matrix format (see Appendix M). However, the data triangulation matrix changed to include the new sub-factors that emerged from the interviews.

Data Analysis

For the data analysis, Atlas.ti was used to create a database, codify, organize, classify, and consolidate the collected data from the four NGOs in order to derive findings. This software is a tool that allows the researcher to analyze data and helps to work with different data and to retrieve data using different criteria, as well as to infer information about the models used, and presenting discussion of the factors. Nevertheless, Atlas.ti cannot help to decide on the overall approach that the researcher wants to use for the data analysis. This database was helpful to understand the rigorousness or trustworthiness of the research, which means that it focuses to accomplish the purpose of this research (Atlas.ti, 2016).

The following steps show how this software was used:

1) Create the database and the initial Code Book by using Atlas.ti.

2) Transcribe the interviews, including the answers of the participants, some literature review, the researcher's field notes, and the triangulation with the different subject positions, using Microsoft Office.

3) Assign codes to transcripts and documents (Atlas.ti).

4) Obtain reports and queries from the database using different criteria (Atlas.ti).

5) Analyze the results in order to get findings and draw conclusions (Microsoft Office and Atlas.ti).

Initial Atlas.ti Code Book

Appendix Q shows the Initial Code Book with the codes (factors investigated) and the sub codes (sub factors that emerged from the interviews) used in the Atlas.ti database. Appendix P also shows the codification of factors and sub factors in Atlas.ti. The codes have been grouped by three categories: a) Subject position codes (starting with "SP") that includes the perspective of each INGO as well as the researcher's position. b) Management codes which includes two families or groups: General information (starting with "G") and factors of knowledge sharing. c) Analytical codes that allows to disaggregate each family in factors (main code) that include two or more sub factors (sub codes). Each factor refers to the nine main factors investigated (starting with "F") and each sub factor (starting with "S") refers to the 17 elements that participants have suggested that might also influence knowledge sharing.

The observational data (field notes and field reflections) of this study were included into the Atlas.ti database. Appendix N includes the diagram of factors and sub factors that influence knowledge sharing obtained from the Atlas.ti database.

<div align="center">

Data Collection Method

</div>

The in-depth interview was used as the method applied to this research. It is likely the most important data-collection technique for qualitative research. Interviewing is an

important way for a researcher to check the accuracy of the impressions he or she gained through observation. Interviews are characterized by synchronous communication in time and place. The type of interview chosen for this research is standardized open-ended, with exact wording and sequence of questions prepared in advance to ask each one of the participants. The type of questions used was: Knowledge questions, experience/behavior questions and opinion/values questions. The interview guide used is included on Appendix K.

Nine individual interviews were done from January 19th to March 14th, 2017, to the four INGOs, located in Quito, Ecuador: INGO-1 (two interviews), INGO-2 (one interview), INGO-3 (three interviews) and INGO-4 (three interviews). The data from all interviews were included in the Atlas.ti Database, as well as the researcher's field notes and reflections.

Models

The use of three models contributed to analyze the data collected in order to look for new insights. There are various emerging and existing capacity building and knowledge management models. Among the existent capacity building models, two models were analyzed. The first model is the single-loop and double loop learning (see Appendix H) by Argyris & Schon (1978), which was a significant contribution to organizational learning systems and was useful to understand experiential learning. The second model is for capacity building by De Vita & Fleming (2001), researchers at the Urban Institute that is based on topics of civil society, sustainable development, and organizational management to demonstrate how nonprofit capacity is related to community capacity (see Appendix F). In addition, among the knowledge sharing models, the SECI model of knowledge generation (Nonaka & Takeuchi, 1995) was also analyzed. These models were revealed in Chapter

2-Literature Review and were used to be compared with the findings of this study for the discussion and make conclusions.

This study is transferable by inviting readers to make connections between the factors that influence knowledge sharing in INGOs and their own experience. Qualitative methods allow researchers to elaborate general recommendations and provide insights using qualitative data. It will also be applicable to a similar context in this country.

In this chapter, the data collection method and its codification of the interviews performed in Spring 2017, to four INGOs located in Quito, Ecuador (INGO-1, INGO-2, INGO-3 and INGO-4) has been explained. Atlas.ti was used to create the database with the data collected, which was coded in order to obtain reports and queries which facilitated their analysis.

Finally, ethical considerations to take into account are: NGOs' staff was ensured that the data collected and results of this study will remain anonymous and safe, giving the guarantee of confidentiality to the research process. Besides, the protocol of this research along with the documents required were submitted to the IRB of the University of New Mexico on November 8th, 2016, which were determined on December 9th, 2016, that this project is EXEMPT from IRB oversight, according to federal regulations.

CHAPTER 4

FINDINGS AND ANALYSIS

Introduction

This chapter addresses the data analysis, which includes the Atlas.ti code book as a useful tool for coding the data collected. Triangulation was used as the technique helpful to analyze data. Convergences and divergences were made up based on the data analysis that facilitates to obtain findings and results of this research. Then, findings emerged from the interviews focused on the participants' subject positions of each one of the four INGOs (INGO-1, INGO-2, INGO-3 and INGO-4) related to the factors investigated that influence knowledge sharing, which were included in the data triangulation matrix.

Data Analysis

The qualitative data required were collected from January to March, 2017. The method used was in-depth interviews. The topic investigated was the initial nine factors that influence knowledge sharing which are: organizational culture, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, media used for sharing information, management practices, organizational structure, mission and strategy, and organizational climate and motivation. These nine factors were examined as part of the main research question: What factors influence technical knowledge sharing in INGOs in Ecuador? Furthermore, the software Atlas.ti was used to create the database with the following qualitative data:

General information

Appendix O shows the answers of the nine participants to the three general questions included in the beginning of the interview guide (main activities, position, and country of origin-birth of participants). A summary of this information follows:

Main activities.

The first INGO investigated, INGO-1, focuses on technical and financial support to local Ecuadorian foundations that promote the fight against social identities. Although the organization has roots in Christianity, its international work is ecumenical. This INGO is working with the human rights, especially in working with children. It is also working on two strategic objectives: combating poverty and violence.

The second INGO, INGO-2, works in four areas:

1) Economic promotion with equity, business training, financial services, and natural resources. Different activities or sub-themes are developed. For example, in economic promotion they work in access to markets, promotion to micro and small enterprises.

2) Training with young people in several topics according to their needs.

3) With local financial institutions, in access to financial education, micro-leasing, financing mechanisms and factoring.

4) Air quality throughout mobile sources, reduction of solid and green-house waste, biogas, water quality, development of state standards for certain sectors subjects and sectors. In summary, these four activities focus on definitely technical cooperation.

The third INGO, INGO-3, is an organization that works on water conservation. There are three strategies related to water, oceans and cities. In Ecuador, INGO-3 works on land and water. In Latin America, the organization works on land, water, seas and infrastructure. At the global level, the issue of infrastructure is included in land. In Latin America, cities could be included in the future in their strategy by

focusing on living beings, including humans. It is a science-based organization and seeks to link with the public sector, private sector and NGOs.

The fourth INGO, INGO-4's main activities are:

1) The professionalization of producer organizations for effective marketing with organizations in coffee and cocoa activities.

2) The accompaniment (support) in the development of public and private policies to improve the supply in such a way that the food supply chains are more sustainable.

Position of participants.

INGO-1: The two participants in this research were the National Director and the Administrative Coordinator (Sponsorship Coordinator previously).

INGO-2: The only participant was the Director Representative for Ecuador and Deputy Director for South America.

INGO-3: The three participants were: The Representative of Ecuador, the Coordinator of the Land Strategy for Ecuador and the Water Safety Manager.

INGO-4: The three participants were: The Regional Director, the Coordinator of the Ecuadorian program and International Consultant, and the staff member responsible for planning, learning and accountability for the regional office (Ecuador and Peru).

Country of origin (birth) of participants.

INGO-1: One participant was from Riobamba and the other was from Quito, Ecuador.

INGO-2: The only participant was from *Müstair*, Switzerland.

INGO-3: All participants were from Quito, Ecuador.

INGO-4: One participant was from Netherlands and the others were from Quito, Ecuador.

Headquarters' country.

INGO-1: Its headquarters is located in Germany.

INGO-2: Its headquarters is located in Switzerland.

INGO-3: Its headquarters is located in United States.

INGO-4: Its headquarters is located in Belgium.

Findings

The findings of this study were:

1) Support the nine factors investigated identified from the Literature which were the basis for the research question of the study. These factors are: organizational culture, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, media used for sharing information, management practices, organizational structure, mission and strategy, and organizational climate and motivation.

2) In addition, 17 additional factors emerged from the interviews in the Ecuadorian context, these are label as sub factors corresponding of four of the nine factors, such as: time management, sense of belonging, human resources policy, accompaniment (support), coaching, good information, learning culture, adequate systematization, constant and effective communication, adequate channels of diffusion, context analysis, technology management, resources management, support of the authorities, fundraising, specialization of the organization, and people's attitude.

The findings obtained from the interviews focused on the participants' subject positions related to the factors investigated were the following:

1) **Organizational culture**

INGO-1.   This INGO works on a culture based on human rights. The organizational culture is based on respect, tolerance, participation, based on these values, living a culture of rights, to understand the walls that technicians have to cope to understand the cultural factors of our partners with target groups. "It facilitates enormously because we do not look at people as a container of knowledge, but we think they have their own different knowledge from ours. Their reasons are not necessarily the reasons of the others." All values make them meet and share their knowledge by attending workshops, for example. The partners' processes of monitoring are reflexive and learn a lot. All of this is a true knowledge sharing.

INGO-2.   This INGO is a technical cooperation entity that operates with a horizontal organizational structure and culture. Being the capital of the institution the knowledge, the human resource and the experience of doing the work, they put much emphasis on the human being, on knowledge management of and on the continuous innovation. "In this way, the organizational culture is done by the people who form part of the institution, with our commitment, with our experience and knowledge and with the values we preach."

At the statement level, organizational culture can be summarized as: INGO-2 as an innovative and constantly growing organization, with methods and processes that unite people, knowledge and content, which will contribute to greater dynamism and performance. This organization also suggested the following element as a factor that also influence knowledge sharing:

Time management. Because INGO-2 is a project executing entity without its own funds. They execute projects, especially for the Swiss government, which requires a lot of time to generate knowledge management with their counterparts.

INGO-3. If the organization is focused on its culture, knowledge sharing is facilitated because culture provides a framework for sharing knowledge. "It is a cohesive organization. It is a mixture of all types of culture with cohesive, effective and long-term work." If there is support from the organization and its culture, knowledge sharing is easier to put into practice. Their goal is to strengthen local capacities and seek institutionalization of what they do. INGO-3 suggested three other factors:

Coaching. It involves training staff in business which facilitates knowledge sharing.

Accompaniment. It is a key element of knowledge sharing due to it involves supporting the stakeholders to accomplish their goals.

Good information. It allows to generate and share knowledge with value to the organization.

INGO-4. It is not so easy to identify the factors that facilitate sharing technical knowledge effectively in this organization, because as INGO-4 has very large goals, this improves the possibilities of knowledge sharing (KS) because these goals support KS. This could lead to problems in knowledge sharing because there is not much investment in knowledge sharing internally but more focus on sharing knowledge with partners. They have a process where learning is important. The last few years, they have made an assessment of impact where they have identified the points that have improved, so they could invite someone from outside to train them. But they do not share much knowledge because of lack of time. There is an

organizational atmosphere quite cordial of work, for that reason to facilitate to share knowledge fluently but I would like to deepen it.

The organizational culture facilitates technical knowledge sharing in several ways. The family environment supports that everyone feels well and they have the openness to share and transfer technical knowledge although they still need to go deeper into them. Our organization is not as competitive as other organizations where there is a lot of competition in the staff. They work more as a team and this is a very important factor because if they compete can lower the level of achievement to be better than the other. Knowledge is power. For example, in planning and monitoring meetings they share technical knowledge and in training they make a debate to build knowledge, instead of competing among them. Before they were competitive, people did not share technical knowledge, but now the organizational climate is better, and they also share the links to websites to learn all knowledge shared with others.

Other factors suggested were:

Time management. Organizations are in an era where they have many things to do and they have little time for this technical knowledge sharing.

The sense of belonging. Of each one of the team, is important and that is why there must be people involved. There must be good planning to facilitate technical knowledge sharing throughout written documents but it is more effective to hold meetings to discuss topics.

Human resources policy. Another factor that influences knowledge sharing is the human resources policy (such as motivating yourself) which does not compensate for individual performance but tries to motivate people throughout training, job

exchanges in other countries and personal growth to motivate people to share knowledge.

Learning culture. A learning culture is required to facilitate knowledge sharing.

2) **Role in organization**

INGO-1. This factor is the most important, depends on the position that a person has in the organization to be able to either transfer knowledge or in turn receive information or new knowledge.

INGO-2. The organization shares technical knowledge from their role in many ways, such as: throughout learning communities, in meetings, advising strategically to partners, publishing documents, uploading information, etc. "We understand our role as a catalyst for action: we provide an environment conducive to entrepreneurship, access to information, skills and markets, and therefore the generation of jobs and income."

INGO-3. "We share technical knowledge since we have available methodologies, software, contacts, etc. We share it in various ways, through processes that have the ability to train people with external actors who share their knowledge and experiences." When sharing information or reflecting on each other, it is a process where they transfer the information and know-how so that it is useful for the partners. It is a process that is being explored, constructed, generated and shared among all the subjects within the organization.

INGO-4. People in INGO-4 share technical knowledge in their role in different ways. First, they share the information that comes to them. They are part of the whole process of creating the strategy, of implementing, of defining what they are going to do in the lines that they are implementing. Second, there are debates and discussions on each topic where they share the knowledge they have. "My role is

more strategic and less operative but I try to debate what I think to achieve a consensus, for example, we are in the process of creating the intervention frameworks where we have made a theory of change where I contribute my knowledge of the organization to create this theory of change and formulate the objectives for the projects and this goes to the expected results and how to achieve them to support the organization to achieve these results or create public policy which are other mechanisms necessary but at the level of strategies."

3) **Procedures for managing knowledge**

INGO-1. "We do not have specific procedures but it has institutional positions of capacity building that involves from the analysis of what it serves us to what we achieve with the processes (of training, etc.). Depending on the type of subject, we analyze how to do it, how we can reach goals, define strategies, and elaborate institutional mandates for strengthening local human resources capacities. We do not have processes or procedures about this, but we consider education as education for life serves for the organization and also for humanity."

INGO-2. They have defined procedures for sharing knowledge through different mechanisms:

At the project level.

- Meetings - reports - Skype - communications - email – calls.
- Workshops - seminars - evaluations / planning.

At the content level – sector.

- Knowledge management group, for example, at the institutional level there are groups for inclusive finance / market development / cocoa / finance / gender / environment, etc.

- Virtual platform, called SharePoint, where it is stored - processes - reports and manages information, meetings, calls.

At the regional level.

- Regional workshops with project managers - topics to be addressed that are of regional interest.

- Exchanges of documents – information.

- Visits - missions – workshops.

At institutional level.

- Annual events on specific topics, for example last year they worked on management level the mid-term evaluation of the strategic plan, where directors worldwide participated.

- This year will be a workshop on monitoring and measurement of results with representatives from all countries.

- Bulletins - reports - management communications.

INGO-3. "The organization has defined procedures for sharing technical knowledge. Information is always shared by several instances, using links that establish who created it, how it is cited, how it is sent, if we know what is sent, etc. If information is not available, we search or create it and then we share it with our partners."

INGO-4. "We have some processes defined for sharing technical knowledge. Part of this is the follow-up sessions of the actions they perform, as well as the joint and external evaluation that is socialized in the team. There are training processes, such as within the week of follow-up there is a day of collective training, and external events with partners and outsiders which support the technical knowledge sharing. For example, climate change, value chains, workshops on the coffee and

cocoa sectors. Those responsible for these axes assist, learn from the outside and also share our knowledge and experiences with partners and is reciprocal, with people from the public and private sector and producers."

4) **Perceived value of knowledge sharing**

INGO-1. "We believe that sharing technical knowledge between us is very important in order to improve our work. For example, in the case of child protection policies, this topic is new but in recent years the headquarters considered important to elaborate and disseminate them to all venues so that each partner has its own policies. This is a plus that is highly valued by all organizations worldwide because the focus on children is very valuable for both the organization and partners."

INGO-2. "We perceive value in knowledge sharing in different ways, such as: feeling part of the institution, information on other similar projects, use of information, reduction of time to prepare proposals, exchange of experts between countries, contacts at the Latin American level based on information from colleagues, constant growth and challenge to continue innovating, creativity and being constructive."

INGO-3. In general, what people share is valued by the organization. However, it can happen that certain knowledge is not necessarily relevant or useful for someone within the organization. "We value technical knowledge because the interest of the organization is that what we do be known by others. So, technical knowledge sharing is valued in our organization and always try to take our knowledge and experience to other places."

INGO-4. *"Technical knowledge sharing is highly valued in our organization. We are working in development management and technical knowledge sharing is very important and basic to be able to do our job. For example, the fact that everyone

asks for more time and flexibility to discuss certain topics and ask for training shows that it is highly valued."

5) **Media used for sharing information**

INGO-1. The organization uses several types of media, such as: communication by email daily with Germany's headquarters, Skype once a month, telephone and WhatsApp when Skype does not work, and face-to-face meetings. The organization has a web page that contains all mandates, guidelines and world codes. INGO-1 does not have computer systems. "There are also events at least once a year for training and accountability, developing joint strategies, commenting on how the organization is, how they are meeting the challenges, etc."

INGO-2. It uses: Virtual platform, internet, email, phone calls, Skype, virtual conferences, WhatsApp, visits, workshops / meetings, official communications, and reports / presentations to share knowledge.

INGO-3. "We use different levels of communications with managers, administrators, accountants, project managers in other countries, etc." This INGO uses all kind of media available to support technical knowledge sharing within the organization, such as email, web, Skype, not so much social media but some people use it, telephone (does not use it institutionally), face-to-face in meetings and local and international training events. It also uses technical, administrative and financial computer systems, and for contracts with public actors.

INGO-4. "We use all kind of media to support technical knowledge sharing within the organization such as the organizational Web page, Facebook (2-3 times per week), Yammer, Office 365 (daily and permanent), and email (daily and permanent). Internationally, they occasionally use Twitter and more frequently to communicate with the headquarters in Belgium. We use LinkedIn occasionally to

establish contacts with donors and make alliances with other actors and also to share interesting topics like videos. We use Skype every day with the team from Peru and internationally with Belgium and other countries, as well as with contacts, companies and partners."

6) **Management practices**

INGO-1. *"About this, there is a long discussion. Sometimes there is a sort of unblocking between the continental cultures. For example, the main office in Germany has to work with others from African and Asian cultures, and certain controversies can exist in certain moments. Nevertheless, we seek to share their mandates to serve everyone on all continents to become general and not linked to local contexts. For example, each country has adapted the children's compartments through an annex to generate a general link to fit their own local context. These general organizational practices are adopted and adapted locally by managers and all members of the organization. For instance, the global strategic plan but each country must develop its own local plan only by this organization, not by partners."* Other factors that influence knowledge sharing are:

Adequate tools (resources management). For example, how to create empathy and reach people with practical exercises, case analysis, teamwork, etc., which facilitates sharing knowledge properly.

Context analysis. To know a lot about the context in which the partners work due to INGO-1 does not work directly with the communities but with the partners who execute the projects in the communities and INGO-1 gives the technical and financial support to its partners and share knowledge and experiences with them.

INGO-2. The core organizational practices support knowledge sharing. The computer system or platform supports the ordering, structuring and organization of

information. Culture is project-based but requires reflection and common sense to assess whether they are doing well. "For this reason, we have periodic meetings to evaluate progress. We also provide feedback about whether or not it is going well, monthly visits, meetings with counterparts, where we are and what is happening and how." The strategy of how they implement knowledge management consists of having a system of learning communities and a share point where they define how and what is shared and everyone socializes knowledge and information.

INGO-3. "Our organizational practices are oriented to the vision of international cooperation. This process is aimed at strengthening organizational capacities based on information and knowledge sharing. Our job is to generate useful information for all to be analyzed, some will not serve but always is shared. Information that is not shared is the one that does not exist or does not serve. There is no secret information. We develop projects, generate knowledge and share it through the organizational culture." Other factors that influence knowledge sharing are:

Technology management. In some cases, software that works elsewhere not necessarily has to be applied locally, but it must be accepted first and then adapted. Part of sharing knowledge is that software developed in other countries is available to other actors. Sharing knowledge and skills is a two-way process.

Resources management. "We transfer resources to the partner which is another factor that during the execution the partner is part of the process of capacity building." Partner involvement in the design and implementation and, capacity building of partners (Ministry of Environment, communities, local government, etc.) are key elements for them. These factors are the same outside and within the organization.

Clear language (constant and effective communication). INGO-3 is a science-based organization which content is well shared with others, internally and externally. Being an international organization, it is important that the transfer be in various cultures and languages (Chinese, Portuguese, Spanish, French and English).

Communication channels that work (or adequate channels of diffusion). Technical knowledge sharing is done with other countries located in Latin America and Africa through the exchange of employees within INGO-3 and outside the organization, in order to learn and share knowledge and information on water resources, protected areas, conservation planning, climate change, and coral management. Cities are still a new strategy. Corals are linked to seaweed. Land conservation and protected areas are also topics with a large process of technical knowledge sharing.

INGO-4. Technical knowledge sharing improves managerial practices in the organization because it is necessary to share knowledge in all areas in order for the people involved to improve their work. For example, knowledge of how organizations work helps a lot in making decisions in the team. There are times when the administrative and financial manager participates in technical meetings for decision making.

There are other factors that influence knowledge sharing are, such as:

Adequate systematization. Also supports knowledge sharing.

Support of the authorities of the organization. This is needed to foster these moments of technical knowledge sharing. The fact that there is commitment or support of the policies of the organization goes hand in hand with the organizational culture, because there can be many cases where information is

included in the policies but compliance depends on the person who directs it and uses adequate technical knowledge sharing. The support of directors in a process of dialogue or conversation is required. Everyone involved should support the flow of technical knowledge sharing. If the head does not have an open mind, the rest will listen but there is not going to be a real sharing.

Constant and effective communication. Or adequate channels of diffusion, is another factor in formal weekly meetings and is often done in informal spaces such as drinking coffee to share knowledge and the experiences gained in the processes. The decision to include knowledge sharing as part of the institution's policies is key.

7) **Organizational structure**

INGO-1. The structure is geographic and contextual with a single criterion that is developed in each country by analyzing the different local contexts. Each country has its own interests. All trainings and events are closed by generating agreements and commitments. "For example, we can replicate, investigate, deepen, and multiply the know-how that was jointly constructed."

INGO-2. The organizational structure of INGO-2 is displayed in Figure 6 that shows the strategy that consists of an Executive Director & CEO who focus on three areas: market development, field operations and business administration.
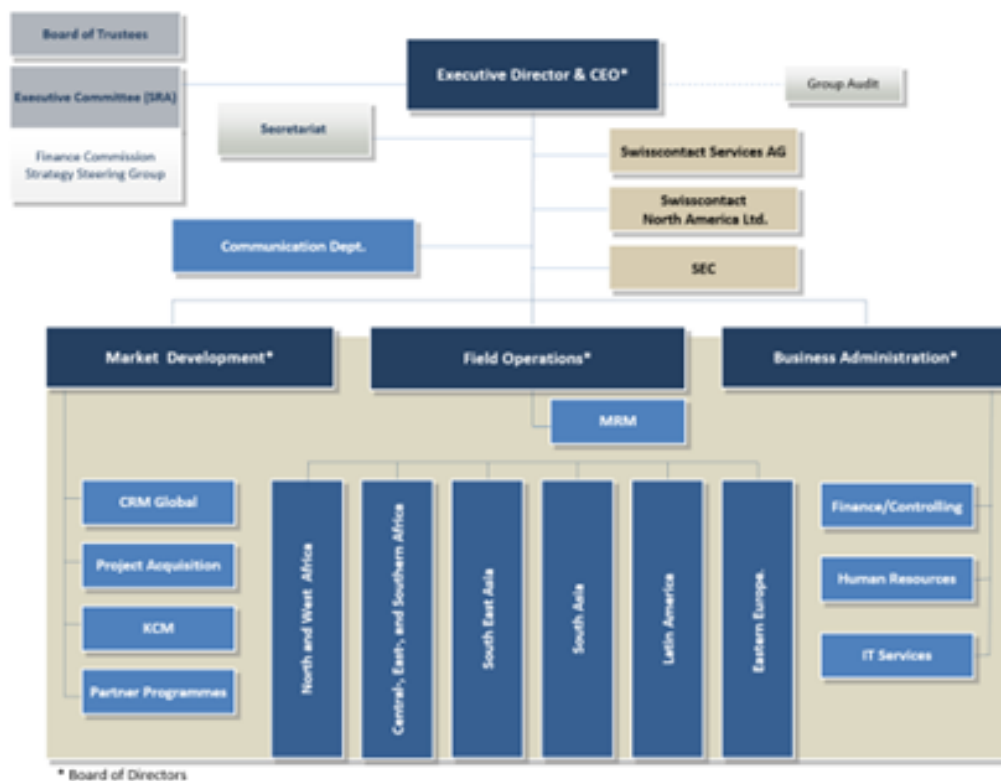
Figure 6. Organizational structure
Note. Retrieved from "Estructura Organizativa", de Chavez, R., April 28, 2017. Retrieved from
https://mail.yahoo.com/?.intl=e1&amp%3B.lang=es-
US&amp%3B.partner=none&amp%3B.src=fp#8769121403

INGO-3. It has a geographical, goal-oriented and centralized structure for Latin America. However, the organization has a decentralized structure at the global and national levels. Ecuador manages its own indicators. This mixed structure facilitates technical knowledge sharing within the organization.

INGO-4. *"*We are going from a centralized organization towards a geographic structure but we are in the process of working in clusters at international level. This current structure supports technical knowledge sharing within the organization. There is a group that works in the cluster and organizes itself against the goals. We are going to define more clusters to evaluate the advance toward the results, which can share more information across clusters.*"* There are four clusters including

cocoa, coffee, rice and food smart cities. In Ecuador, they are part of the three clusters (except rice).

8) **Mission and strategy**

INGO-1. *"Our mission is very simple because it is based on human rights. The sacred word that allows us to connect with all are the human rights of children because it allows for connection with all the issues of the organization."* Their focus is on the exercise of the human rights of children, not excluding the human rights of others. Because it allows them to be all located in this mission and all discussions and actions focus on the human rights of children, this facilitates the transfer of technical knowledge internally in the organization, due to all the issues are emphasized and focus on these human rights of childhood.

INGO-2. *"In 2012, we had several 20/20 strategic workshops for reviewing our mission, vision, principles and values, as we continue working. Before that, we used to have 20/15 objectives. Then, the Objectives of the Millennium arrived, which are harder to reach. Our institution is in a continuous adaptation to meet the millennium goals, which is not easy due to we have to do adjustments to be efficient and relevant in the world of development."* This factor is more strategic due to knowledge management is more global but not all people can generate these spaces in a fluid way; they think they should share what they are doing so it could be useful for their organization in another country. Additionally, technicians find it difficult to share documents with other offices located in different countries. It is like the jewel of the crown for them because knowledge sharing is not easy. It is related with how to share more with the institution and give more to the organization which is the dilemma. This is also related to their attitude which is part of their culture or organizational climate due to it is not spontaneous because

it is cultural. In Latin America, everything has to be asked, almost nobody gives anything, everyone cares for things that does not make sense because knowledge is universal, and it can be an input for other things. Mistrust is a problem because there is much academic piracy or plagiarism while Europe takes great care, like in Asia and Africa with the piracy, so breaking this topic is needed to generate knowledge. It includes:

Vision. "We make a constant and effective contribution to reduce the economic disparities in a globalized and increasingly complex world."

Mission. "Promote economic, social and environmental development. We fulfill our mission by creating opportunities for people to improve their living conditions through their own efforts, successfully integrating with the local economy."

Strategy. "We understand our role as a catalyst for action: we provide an environment conducive to entrepreneurship, access to information, skills and markets, and therefore the generation of jobs and income. We offer practical, market-oriented solutions that are local and specific to overcome the challenges of socio-economic development. We direct all our activities, efforts and resources to make a sustainable impact."

INGO-3. "Our mission greatly facilitates knowledge sharing by focusing on the nature conservation which is a joint effort." It is a mandate to share technical knowledge among all of them within the organization.

INGO-4. "We have a well-defined mission which is the axis for our technical knowledge sharing because we work based on our mission and we try to improve our knowledge. Our mission is that we support family farming as the best option to reduce rural poverty to support and satisfy food in the world without ecological oppression of the planet. This mission is the basis for the major part of our

technical knowledge sharing. The new strategy of working with self-organized groups strongly supports a greater technical knowledge sharing internally." For example, Office 365 allows a virtual space to open and supports technical knowledge sharing. In addition, the headquarters in Belgium has a directory that supports that the contributions from INGOs of different regions are more important because knowledge is created and shared in all regions and not only in the headquarters. Now, it is decentralized to regional level in the 8 regions: Andean, Central America, West and East Africa, Congo, Indonesia, Vietnam and Belgium. Additional factors that influence knowledge sharing are:

Fundraising. "We need to have less ambitions or more money in order to have more staff and greater ability to invest in learning and knowledge sharing." The team from Peru comes to Ecuador to work together in fundraising activities. Another topic on the training process is on the financial analysis, among others, to support companies.

Specialization of the organization. Which supports knowledge sharing.

9) **Organizational climate and motivation**

INGO-1. The organizational climate is people oriented, which is propitious to sharing technical knowledge because at the level of the organization the documents are exposed. Other organizations are always opened and invited to participate in events. "We always share our experiences with others, even to get support for our work from other organizations, and always share our work to motivate us to participate. The environment or climate is extremely important because when we do our work, we consult with other organizations to motivate us to think different. We listen by opening our minds and ears to facilitate the context for people to feel supported with tolerance, understanding and respect. Employees that feel valued,

duplicate their performance in the office." They invite children to participate in meetings and events in order to share in family. Other factors that influence knowledge sharing are:

Human factor (people's attitude). INGO-1 must have a person who manages knowledge sharing well and also has an external expert to provide advice on this matter. Other important attitudes are: treating people with respect, dignity, valuing their knowledge, understanding their reality and context (endogenous factors).

INGO-2. As discussed, the organizational climate is very good in permanent encouragement and pursuit of excellence. The motivation comes as much from each collaborator as from the superiors, seeking to retain the human resource, to encourage its growth and development. "Our organization has a mixture of the four types of organizational climate: people oriented, rules oriented, innovation oriented and goal oriented. Each climate power the others. If the institution is only people oriented, it can lose the vision. Innovation oriented per se does not solve any problem. For this reason, it is important to be results oriented. We need to be goal oriented and innovation oriented when we develop projects and also be committed to discipline. The organization has a mixture of all four climates, which facilitates achieving sustainable results. All four climates are equally important but it depends on the timing of the project or intervention. For example, in the project implementation, we focus on goals and results with a people-oriented and innovation-oriented approach." Other factors that influence knowledge sharing are:

People's attitude. The attitude is very important because they have to be proactive since many people expect to receive and they are willing to debate, listen and create

knowledge but the daily work sometimes influence our attitude due to the workload.

INGO-3. The organization has full openness to share information by complying with relevant procedures and citing sources. The organizational culture is focused on transfer knowledge and information and people know what they do. The organizational climate would be focused on rules-oriented because procedures are followed to share information. It is a mixture of all types of organizational climate: people oriented, rules oriented, innovation oriented or goal oriented which facilitate knowledge sharing. Other factors that influence knowledge sharing are:

People's attitude. For effective knowledge sharing, there must be a real contribution of people, the institution and the society. What they do becomes institutionalized, that is, what they develop with local actors go beyond project indicators, but impact by working with various actors such as government, guilds, companies, and that go beyond and become an impact. The main factor is people because they make an approach with the partners and it is the starting point of who participates in the design of the proposal. All these elements are key to effective international cooperation. INGO-3 as an INGO tries to do all this, and some also try to strengthen the knowledge sharing. Now, they are local actors who are strengthened in these capacities. They are an entity that facilitates processes that seek to be translated into results, not only to know other methodologies but also to be able to handle processes by sharing the knowledge that is developed in this organization locally and located in other countries.

INGO-4. The climate of this INGO is oriented towards people, goals and innovation, but this creates problems because to achieve the goals knowledge is required to be shared. However, "if we are always innovating, we will not be able

to deepen the knowledge." For example, as INGO-3 is people-oriented, there is no competitiveness, and as goal-oriented organization, knowledge is shared in meetings on how to improve actions. Other factors that influence knowledge sharing are:

People's attitude. Willingness to share knowledge and information. There must also be room for them to receive the information and share knowledge with openness and provide their feedback.

Triangulation

Appendix R shows a summary of the 9 factors investigated that emerged from the literature review and the new 17 sub factors found in this study that influence knowledge sharing, which the four INGOs have mentioned in their interviews. As one can see in this Appendix, all INGOs stated the main 9 factors investigated, which were organizational culture, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, media used for sharing information, management practices, organizational structure, mission and strategy, and organizational climate and motivation. They also suggested the following seventeen factors, which were coded as sub factors of four of the nine factors studied: Organizational culture (time management, sense of belonging, human resources policy, accompaniment, coaching, good information and learning culture), management practices (adequate systematization, constant and effective communication, adequate channels of diffusion, context analysis, technology management, resources management and support of the authorities), mission and strategy (fundraising and specialization of the organization) and organizational climate and motivation (people's attitude). Each one of these findings will be explained in the convergences and divergences section.

The Data Triangulation Matrix format used to analyze data is included on Appendix M. This matrix compares the subject's positions of the four INGOs on each factor and sub factor included related to knowledge sharing in order to determine convergences and divergences. Appendix P shows the codification in Atlas.ti of the initial 9 factors investigated and the 17 new sub factors that have emerged from the interviews analysis.

Convergences and divergences

Based on the Data Triangulation Matrix format (see Appendix M), the following convergences and divergences of each factor investigated have been drawn:

Convergences.

It can be understood as convergence, when two or more ideas coming together into one useful information about the factors studied from the four different INGOs participants. The similarities found in relation to each one of the nine factors studied are:

1) *Organizational culture.*

All four INGOs have a mix of different types of culture. INGO-1 has a dynamic and entrepreneurial, family-oriented and results-oriented culture. INGO-2 has a dynamic and entrepreneurial and results-oriented culture. INGO-3 has a combination of dynamic and entrepreneurial, business-oriented, results-oriented, and structured and controlled culture. And INGO-4 has a clear combination of familiar (40%), structured and controlling (40%), and results-oriented (20%) culture.

Therefore, INGO-1, INGO-2 and INGO-3 have a dynamic and entrepreneurial culture. For INGO-2, culture is a construction in progress. On the other hand, INGO-3 thinks that if there is support from the organization and its culture,

knowledge sharing is easier to put into practice. INGO-4 states that "we need a learning culture to facilitate knowledge sharing."

All four INGOs have also a results-oriented organizational culture. For example, INGO-4 wishes to have a more results-oriented job, without losing work as a family, but with more commitment and more personal dynamism towards their objectives.

INGO-1 and INGO-4 have a family-oriented type of organizational culture because many people say they are part of the INGO-3 family. Also, INGO-1 works like a family group.

2)   *Role in organization.*

The four INGOs share technical knowledge from their roles in different ways. For example, directors share their knowledge from a strategic point of view while coordinators use a technical approach. Another example, INGO-1 claims that the primary factor is the position that a person has in the organization in order to either sharing knowledge or in turn receive information or new knowledge.

3)   *Procedures for managing knowledge.*

INGO-2, INGO-3 and INGO-4 have defined procedures for sharing technical knowledge while INGO-1 do not have specific procedures for sharing knowledge.

4)   *Perceived value of knowledge sharing.*

The four INGOs value technical knowledge sharing, although INGO-2 thinks that knowledge is shared in different measure depending on the role of each person. From INGO-1´s Director´s role, he does not works based on transferring knowledge but on sharing knowledge. INGO-3 shares knowledge through training processes with external actors who share their knowledge and experiences with participants. INGO-2 value knowledge sharing because it facilitates feeling part

of the institution, sharing information about other similar projects, using information with a reduction of time to prepare proposals, and exchanging experts between countries to share their knowledge.

All of them also value technical knowledge resources. However, INGO-3 claims that the resource they need more is time.

INGO-2 and INGO-3 think that these resources can be improved while INGO-1 thinks that technical knowledge resources do not have to be improved but lived. INGO-2 states that they can be improved owing to everything being perfectible because the media evolves with time.

Technical knowledge that INGO-1, INGO-2 and INGO-3 share is valued by others within their organizations. INGO-1 thinks that the reason is the confidence given to others to share their knowledge while INGO-3 uses debates to share knowledge and achieve consensus about specific topics discussed within the organization.

5) *Media used for sharing information.*

The four INGOs use email, telephone, Skype and websites to communicate within their organizations with different frequency.

All four INGOs use various types of media to communicate with their headquarters. For example, INGO-1 uses Skype once a month while INGO-4 prefer to use Twitter and LinkedIn occasionally and Skype more often.

6) *Management practices.*

The four INGOs have organizational practices that support knowledge sharing. INGO-2 and INGO-3 have suggested adequate channels of diffusion as a new factor that influence knowledge sharing. INGO-2 and INGO-4 have stated that technology management might be a new factor related to management practices. INGO-1 and INGO-2 think that resource management is another factor related to

management practices. For this reason, all new factors suggested by participants in the interviews have been treated in this study as sub factor in order to avoid a possible confusion with the nine main factors studied.

INGO-1 uses adequate tools (resources management) to facilitate sharing knowledge properly, for example, how to create empathy and reach people with practical exercises, case analysis, teamwork, context analysis, etc.

7) *Organizational structure.*

All four INGOs have a geographic type of organizational structure. For example, INGO-2 is organized with the headquarters in Switzerland, the board of directors by region, a regional direction, then countries´ offices and projects.

8) *Mission and strategy.*

The mission of INGO-3 and INGO-4 supports technical knowledge sharing. The mixed structure of INGO-3 facilitates technical knowledge sharing within the organization. INGO-4 has a well-defined mission which is the axis for their technical knowledge sharing because they work based on their mission which tries to share and improve their knowledge.

The strategy of INGO-2 and INGO-4 also supports technical knowledge sharing. For INGO-2, strategy is necessary for sharing knowledge due to it is more global but not all people can generate these spaces in a fluid way. For INGO-4, the new strategy of working with self-organized groups strongly supports a greater technical knowledge sharing internally.

9) *Organizational climate and motivation.*

All four INGOs have a people-oriented organizational climate. For example, for INGO-1 it is propitious to share technical knowledge because at the level of the organization documents are exposed.

All four INGOs state that people's attitude is important for an effective knowledge sharing. For instance, INGO-1 must have a person who manages knowledge sharing well. They must also have an external expert to provide advice on this matter. It is also important to treat people with respect, dignity, and value their knowledge.

Divergences.

Divergences are discrepancies that can lead to unexpected findings. These differences found in the data analyzed have to be reconciled somehow. Nevertheless, dissimilar results offer an opportunity for enriching the explanation. Moreover, there were a few cases where some participants within the same organization had opposite opinions about specific topics related to the subject investigated in the interviews. The dissimilarities found in relation to each one of the nine factors are:

1) *Organizational culture.*

INGO-4 would like to have a more entrepreneurial approach because they believe that if they are dynamic and able to adapt to new ideas and approaches, they can make new alliances with other organizations.

INGO-3 establishes accompaniment, coaching and good information as key factors for sharing knowledge while INGO-4 focuses on time management and human resources policy as the most important elements to share technical knowledge with others.

2) *Role in organization.*

INGO-1 shares their knowledge from a reflexive point of view, while INGO-2 shares through learning communities, in meetings, advising strategically to partners, publishing documents, uploading information, etc. INGO-3 shares

technical knowledge by using methodologies, software, contacts, and training, among others. On the other hand, INGO-4 shares knowledge and information throughout debates and discussions in a strategic way.

3) *Procedures for managing knowledge.*

INGO-1 and INGO-2 have different mechanisms for sharing knowledge, like INGO-1 uses education for life for the organization as well as for humanity, while INGO-2 uses mechanisms at different levels (project, content, regional and institutional levels). INGO-3 uses links to trace knowledge and information while INGO-4 uses follow-up sessions, the joint and external evaluation that is socialized in the team, training processes and external events with partners and others to share technical knowledge.

4) *Perceived value of knowledge sharing.*

The four INGOs value technical knowledge sharing in different ways. INGO-1 values it as part of their work and as motivation for them to learn. INGO-2 values it according to the contribution from each person's role, although their contribution is not the same. INGO-3 values technical knowledge sharing because their interest is that their work be known by others. Last, INGO-4 considers it as basic to be able to do their job.

5) *Media used for sharing information.*

The four INGOs use different media to communicate within and outside their organizations. INGO-1 uses face-to-face meetings and training events. INGO-2 uses virtual conferences, WhatsApp, visits, workshops/meetings, official communications, and reports/presentations to share knowledge. INGO-3 uses social media occasionally. Last, INGO-4 uses Facebook, Yammer, Twitter and LinkedIn.

The frequency of media used by INGOs is different. INGO-1 uses email daily and Skype monthly with their headquarters, telephone and WhatsApp when Skype does not work, face-to-face meetings and training events at least once a year. INGO-2 uses Skype or email to communicate with the headquarters, share point, blue cloud and meetings in person to share knowledge and information which frequency depends on the specific topic to be treated. INGO-3 uses email, web and Skype more often than social media, as well as telephone, face-to-face meetings and training events. Meanwhile, INGO-4 uses their Web page, Facebook (2-3 times per week), Yammer, Office 365 and email (daily and permanent), occasionally Twitter to communicate with the headquarters, LinkedIn occasionally, and Skype every day.

INGO-2 and INGO-3 have computer systems: The former's platform supports the ordering, structuring and organization of information while the latter uses technical, administrative and financial computer systems.

6) *Management practices.*

The four INGOs have different organizational practices that support knowledge sharing. For example, INGO-1 uses adequate tools (resources management) to facilitate sharing knowledge properly. INGO-2 has as a strategy to implement knowledge management which consists of having a system of learning communities and share points where they define how and what is shared and everyone socializes knowledge and information. INGO-3 uses technology management, resources management and clear language (constant and effective communication) to share knowledge and information. Lastly, INGO-4 uses an adequate systematization to support knowledge sharing, as well as adequate

channels of diffusion, support of the authorities of the organization, constant and effective communication and adequate channels of diffusion.

7) *Organizational structure.*

However, all four INGOs have other different types of organizational structures. INGO-1's structure is geographic and contextual which develops a single criterion in each country by analyzing the different local contexts. INGO-2's structure is decentralized and geographical which supports the transfer of technical knowledge. INGO-3 has a geographical, goal-oriented and centralized structure for Latin America, but also a decentralized structure at the global and national levels. INGO-4 is going from a centralized organization towards a geographic structure but this organization is in the process of working in clusters at international level, which current structure supports technical knowledge sharing within the organization.

8) *Mission and strategy.*

There are differences in the mission of the four INGOs. INGO-1 has a mission based on human rights. INGO-2's mission is focused on economic and environmental development. INGO-3 has a mission to conserve the land waters on which life depends. While INGO-4 supports family farming to satisfy food in the world without ecological oppression of the planet.

There are also differences in the strategy of the four organizations. INGO-1 has a strategy based on institutional capacity building. INGO-2's strategy supports knowledge sharing as well as the exchange of evaluations, questioning, meeting goals, permanently innovating, etc. INGO-3's strategy contributes to the strengthening of the capacities of their partners and the organization in the host

country. While INGO-4's new strategy of working with self-organized groups strongly supports a greater technical knowledge sharing internally.

9) *Organizational climate and motivation.*

There are differences in the organizational climate of the four INGOs. INGO-1 is people oriented. INGO-2 and INGO-3 have a mixture of the four types of organizational climate; they are people oriented, rules oriented, innovation oriented and goal oriented. While INGO-4 is people oriented, innovation oriented and goal oriented.

There are also differences in how the four INGOs interpret people's attitude. INGO-1 needs to have a person responsible for knowledge management, as well as an external expert. It is also important to treat people with respect, dignity, valuing their knowledge, understanding their reality and context. INGO-2 focuses on being proactive and willing to debate, listen and create knowledge but the daily work sometimes influences their attitude due to the workload. INGO-3 claims that a real contribution of people is needed for the effective knowledge sharing. While INGO-4 emphasizes on willingness and openness to share technical knowledge and information and provide their feedback.

Summary

In this chapter, data analysis was done based on the interviews entered into Atlas.ti database. Factors were coded in order to obtain reports and queries which facilitated the analysis. Findings that emerged show that the four INGOs participants in this study (INGO-1, INGO-2, INGO-3 and INGO-4) agreed that the nine factors investigated influence knowledge sharing. Then, triangulation was used to compare and contrast the nine participants´ subject positions, which allowed the conclusion that there are not only convergences with the nine main factors, but also with some of the 17 new factors

that have emerged in this process. Besides, divergences found might explain different positions of participants regarding the factors or elements that they consider more important than others for sharing technical knowledge within their organizations.

CHAPTER 5

DISCUSSION

Introduction

This chapter addresses each one of the three models proposed on Chapter 3-Methodology compared with the findings about the factors investigated and the approaches of the INGOs studied, in order to answer the research question. This discussion was contrasted with the literature review about Community Capacity Building in INGOs and Knowledge Sharing with the purpose of having other insights to facilitate making conclusions.

Knowledge sharing

Research question

The research question posted in Chapter 1 - Introduction was "What factors influence technical knowledge sharing in INGOs in Ecuador?" The answer to this question is: All nine factors studied in this research influence technical knowledge sharing in INGOs established in Ecuador. This also contributes to answer the ten research sub-questions (see Appendix L) posted in Chapter 1-Introduction. All of this is explained in the way that the three models (Single-loop and double-loop learning, a model for Nonprofit Capacity Building and the SECI model) help to understand the factors studied as a result of findings obtained on data analysis, which are presented in detail in the next pages. Other factors that are not related to these models are exposed later which also provide insights to answer to the research question and sub questions.

Models

The next pages will discuss two models related to capacity building (the Single-loop and Double-loop Learning model, and the Nonprofit Capacity Building model) and one model related to knowledge management (SECI model of knowledge

generation), which explains some connections with the findings of this research that were obtained from the data analysis included in Chapter 4 of this document.

Single-loop and double-loop learning.

The single-loop and double loop learning (see Appendix I), created by Argyris & Schon (1978), is a significant contribution to organizational learning systems and is useful to understand experiential learning.

Piiroinen, Boswell, & Singh (2014), state that single-loop learning is one kind of organizational learning process. In this stage, members of organizations modify their actions based on the results expected and reached. In other words, if something goes wrong, it is necessary to consider how to fix the situation by facing problems, errors, inconsistencies or impractical habits instead of changing actions or behavior to fix or avoid mistakes. Then, it is required that workers adapt their own behavior and actions to the situation accordingly, in order to mitigate and improve it (see figure 7). However, there will be new problems in the future if the root causes are not removed due to it is necessary to challenge our underlying beliefs and assumptions instead of making only small adjustments.

Figure 7. Single-loop learning (Thorsten's wiki)
Note. Retrieved from "Single and double loop learning", Piiroinen, J., Boswell, S., & Singh, N., July 14, 2014. Retrieved from https://organizationallearning9.wordpress.com/single-and-double-loop-learning/

The double-loop learning consists of "changing the rules" and it is based on "a theory of action" designed by Chris Argyris and Donald Schon. This stage consists of correcting or changing the underlying causes (i.e., assumptions, organizational norms, and ways to work, policies, among others) behind the problematic action.

Double-loop learning facilitates understanding the assumptions, better decision-making and leads to organizational learning. Self-awareness, honesty, candor and taking responsibility are the skills required by this stage. This is a tactical level where the organization can examine the underlying assumptions behind the actions and behavior and learn from those mistakes and incorrect methods in order to remove the root causes to improve the behavior. It allows that INGOs answer to question "Are we doing the right things?" The answer to this question is positive. However, INGO-2 and INGO-3 think that technical knowledge sharing resources can be improved while INGO-1 thinks that they do not have to be improved but lived. INGO-2 states that they can be improved due to everything is perfectible because the media evolves with time. See Figure 8.
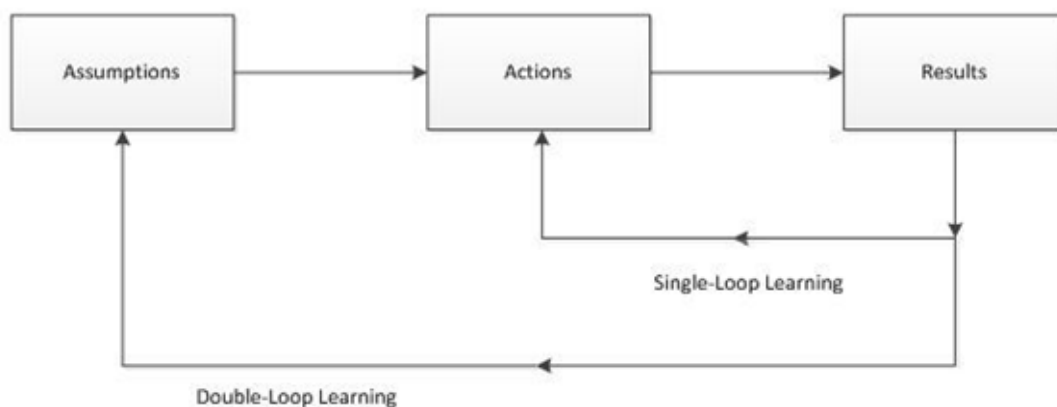
Figure 8. Single and double-loop learning (Thorsten's wiki)
Note. Retrieved from "Single and double loop learning", Piiroinen, J., Boswell, S., & Singh, N., July 14, 2014. Retrieved from https://organizationallearning9.wordpress.com/single-and-double-loop-learning/

The triple-loop learning is also called "double-loop learning about double-loop learning" and it was inspired by Argyris & Schön (1978), although it has not been included in their publications. In this third stage, learning organizations should reflect on how they think about rules and not only think that rules should be changed in order to understand more about their organizations. Triple-loop learning focuses on answering to the question "how do we decide what is right?" See Figure 9.

Organizational learning occurs when an organization reaches the goals and the actions equals the results, and also when the intentions and outcomes are not equals and correct. Individuals are instruments of organizations throughout their behavior that lead to learning. This means that organizations do not perform the actions that produce learning but create conditions that influence how individuals frame the problem and find the solution.
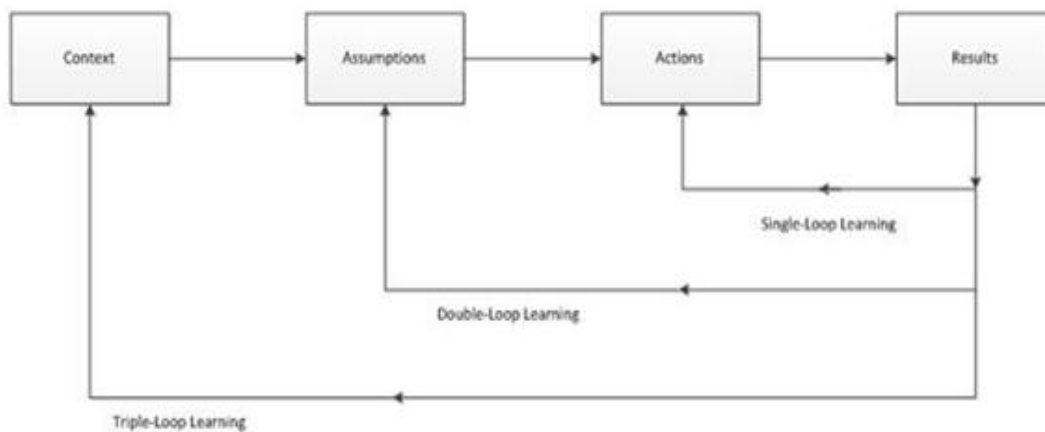
Figure 9. Single, double and triple-loop learning (Thorsten's wiki)
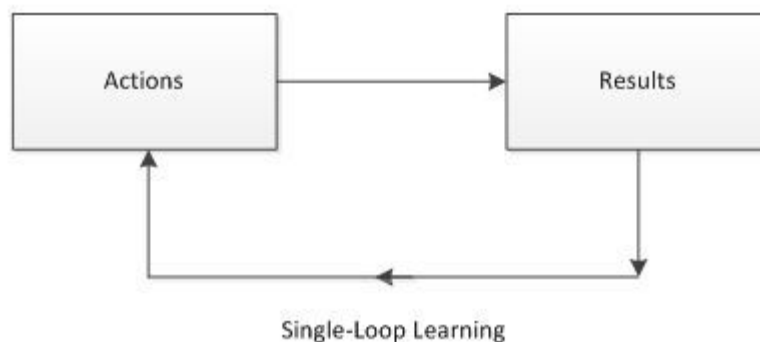***Note.*** Retrieved from "Single and double loop learning", Piiroinen, J., Boswell, S., & Singh, N., July 14, 2014. Retrieved from https://organizationallearning9.wordpress.com/single-and-double-loop-learning/

Nevertheless, individuals can include biases and constraints to the learning process such as their limited capability for information processing. It is highly

recommendable that organizations decompose double-loop issues into single-loop issues due to single-loop issues are easier to manage and use double-loop learning for the complex issues. See figure 10.
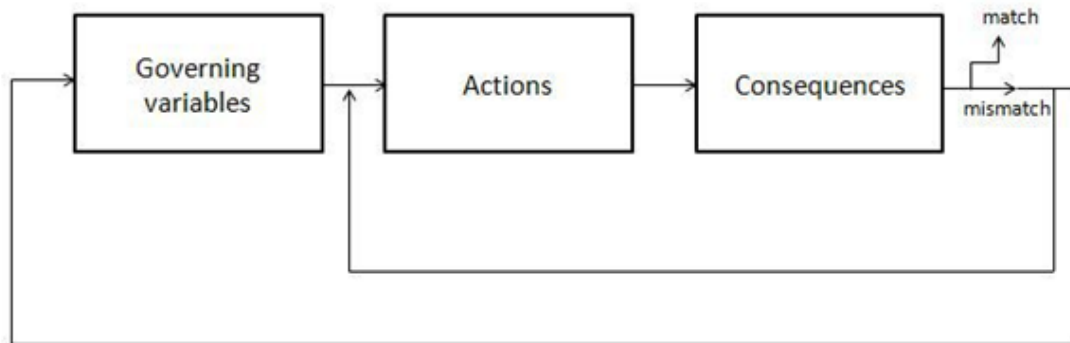
Figure 10. Single and double-loop learning
Source. Retrieved from "*On Organizational Learning",* Argyris, C., 1999. Oxford, Reino Unido: Blackwell Publishers, 2nd Edition.

In summary, in the single-loop double-loop learning model, the single-loop learning tries to correct errors without questioning underlying assumptions while the double-loop learning detects errors, questions underlying assumptions behind the actions and behavior and also learn from these mistakes, the triple-loop learning allows the organization to learn about learning.

In the case of INGOs, they can answer to the question "Are we doing the right things?" at the operative level of this stage. Participants have responded that their activities focused on accomplish their organizational missions. Therefore, they think they are doing the right things. McElroy (1999) argues that some attempts to build communities of practice focus on knowledge sharing and transfer. The target of this kind of intervention is single-loop learning. In this way, sharing knowledge aims to distribute existing organizational rule sets in the whole organization, so that workers can employ "best practices" on their jobs. Knowledge sharing focuses

on where organizational knowledge comes from and where knowledge resides within an organization and how it is expressed.

INGOs can get to know new ways of learning and new commitments by applying the triple-loop learning which encompasses both single- and double-loop learning. In this way, these organizations can have many benefits. They can understand how to link problems with solutions even when separated widely by time and place. It facilitates to understand how previous actions could create the conditions that caused the current situation and problems. The organization learns how to learn which can change the relationship between organizational structure and behavior. The organization would learn new ways to comprehend and change its purpose. The organization would have a better understanding of how to respond to its environment.

Regarding this research, the following factors investigated are related to this model: a) Procedures for managing knowledge are considered a sort of rules that the organization has established to facilitating knowledge sharing. b) Management practices may improve knowledge sharing by putting the members of the organization in a more knowledge sharing mindset through "rules" to follow. These findings are:

Procedures for managing knowledge. Only INGO-1 has no procedures defined for sharing technical knowledge while the others have some processes, such as: the follow-up sessions of the actions performed, as well as the external evaluation that is socialized in the team. There are collective training processes, and external events with partners and outsiders which supports technical knowledge sharing. For INGO-2, information is always shared by several instances, using links that establish who created it, how it is cited, how it is sent, what is sent, etc. If

information is not available, they search or create it and then they share it with their partners. This means that there are some procedures to guide how information and published knowledge should be shared and communicated to others.

The information that is expected to be shared is treated in two ways:

Internally, they share reports and acts of internal meetings, semi-annual follow-up reports, and annual and impact assessments at the end of each program. Everyone can share whatever they want, such as: photos, success stories, news of events, workshops, publications, etc. Information is shared depending on the level within the organization.

Externally, they share projects, some procedures, quarterly reports, press releases, sometimes software, some methodologies, reports that are public, and information to others. Knowledge management is more extensive through learning communities. Information and knowledge that they share is very broad. They use Facebook, email, Twitter, websites, etc. to share information which depends on the needs. Sometimes, an office asks for help from certain countries; nevertheless, not always everyone participate in attending the request, but only at the level of commissions and experts on the topics. To conclude, they share all kind of information internally, but externally what they share is more specific with their partners and stakeholders.

Jennings (2011) makes a distinction between business processes and business procedures. She defines processes as the automated resources that support knowledge sharing by enabling electronic management of knowledge through databases, web pages, wiki's, electronic mail. While procedures are the required tasks, activities or steps that an individual must perform in order to add knowledge to the resources. However, the new information generated is not presented in a

consistent structure. For this reason, it is not easy to extract knowledge from information. In this case, workers have to identify the knowledge. In her study, the results showed that respondents identified the resources as effective and valuable when knowledge sharing capability (process) existed and when knowledge sharing was mandated (procedures) from shared knowledge resources. Therefore, the use of a knowledge sharing resource must be prescriptive and mandated. Moreover, when the information is dispersed, it is desirable to allow the individuals jurisdiction over this information, in order to assure that the information is manageable. Then, individuals must follow business processes and procedures in their daily activities to ensure that valuable knowledge will be shared. This author also has found that other factors that impact technical knowledge sharing are the sense of responsibility, beyond cultural differences, procedures, and a work well done. Procedures and processes encourage people to share valuable knowledge.

Management practices. The four INGOs participating in this research have organizational practices that support knowledge sharing, such as: a) Appropriate tools to facilitate sharing knowledge properly. b) A strategy to implement knowledge management which consists of having a system of learning communities and share point (INGO-2) where they define how and what is shared and everyone socializes knowledge and information. c) Technology management, resources management and a clear language (constant and effective communication) to share knowledge and information. d) An adequate systematization to support knowledge sharing, as well as adequate channels of diffusion, support of the authorities of the organization, constant and effective communication.

These general organizational practices are adopted and adapted locally by all members of the organization. For example, INGO-1 has a global strategic plan but each country must develop its own local plan. The computer system or platform supports the ordering, structuring and organization of information. For some organizations, the strategy of how to implement knowledge management consists of having a system of learning communities and share point where they define how and what is shared and everyone socializes knowledge and information. The organizational practices are oriented to the vision of international cooperation. This process is aimed at strengthening capacities based on information and knowledge sharing. They generate useful information for all to be analyzed, some might not be useful but always is shared. Information that is not shared is the one that does not exist or does not serve. There is no secret information. They generate knowledge and share it through the organizational culture. Of course, everything works in an integrated way, because the non-compliance to do something would affect the performance of other areas.

The core organizational practices of some INGOs include the use of Yammer and Microsoft Office to support knowledge sharing (INGO-3). Yammer is used for doing document collaboration (discuss, edit, and generate documents based on knowledge sharing) individually or in groups, share insights and connect and engage people through Skype and share point. Using this important technological tool (Technology management), each group includes information, discussions, etc., to share their knowledge (ideas, photos, actions taken), and find what they need more easily. In addition, they organize all processes of monitoring and evaluation that supports knowledge sharing.

Regarding the factors that facilitate sharing technical knowledge effectively in organizations, they have been explained in Chapter 4-Data Analysis of this document, in which all INGOs studied have expressed that all nine main factors analyzed influence knowledge sharing in different ways. See Figure 11.
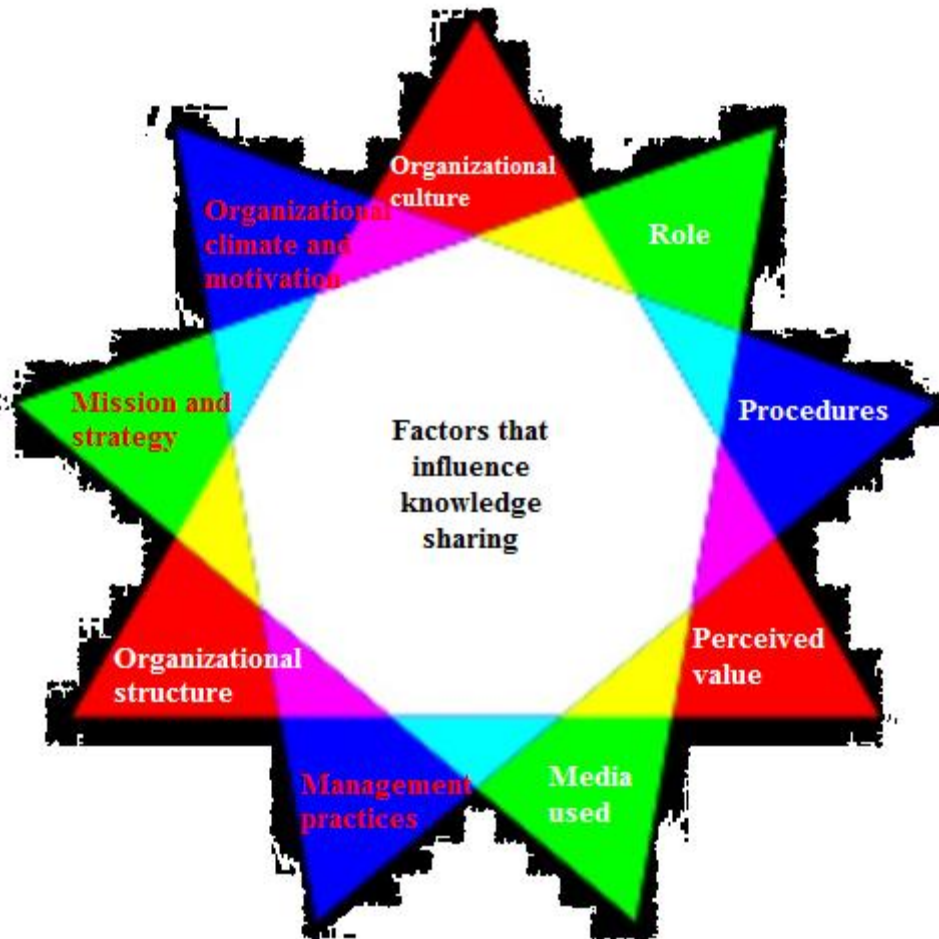
Figure 11. Factors that influence knowledge sharing
Source. Author

All four INGOs have also suggested the following new sub-factors that also influence knowledge sharing but they are not related directly to this model:

Adequate systematization. It allows to organize the processes and information according to a method or pattern in a system that facilitates knowledge sharing.

Constant and effective communication. INGOs need to use a clear language to communicate and share knowledge effectively internally and externally. It is

important that the sharing be in various cultures and languages that use the organization internationally.

Adequate channels of diffusion. The use of communication channels that work allows individuals to share technical knowledge. For example, they can use meetings, discussions, coffee breaks, web pages or publications in magazines, among others, to share knowledge and information with others.

Context analysis. It is necessary to analyze the context in which their partners work in order to facilitate knowledge sharing with them.

Technology management. The use of technology is required as it is a very useful tool that facilitates technical knowledge sharing. There is a wide set of tools available in the organizations that workers can use, such as email, social media, virtual meetings through Skype, computer systems, websites, digital magazines, software, etc.

Resources management. Adequate tools of management are required in order to transfer knowledge properly. For example, how to create empathy and reach people with practical exercises, case analysis, teamwork, etc. INGOs transfer resources to their partners which is another factor that during the project execution, the partners are part of the process of capacity building. Partner involvement in the design and implementation, and capacity building of partners are key elements for these organizations.

Support of the authorities of the organization. This is needed to foster these moments of technical knowledge sharing. The support of directors as in a process of dialogue or conversation is required. Everyone involved should support to flow the technical knowledge sharing. If the head does not give the openness to their

team, they will listen but it is not going to be a real sharing, which is related to people's attitude about knowledge sharing.

In contrast, there are a number of practitioners that propose different variables or factors that influence knowledge sharing. Some of them suggest the learning organization as an important variable (Senge, 1994;Watkins & Marsick, 1993; and Marquardt, 1995). Other authors (McGill, Slocum, & Lei, 1992;Ulrich, Jick, & Von, 1993; Garvin, 1993; Calvert, Mobley, & Marshall, 1994; Handy, 1995; Hoffman & Withers, 1995; Otala, 1995; Thompson & Weiner, 1996; Mai & McAdams, 1996) support two conclusions. First, some of them propose three variables: the learning processes, the role of organizational strategies, and the role of management. Second, other scholars suggest other variables: the learning organization features, outline conditions, characteristics, strategies, skills, key principles, core practices, management architecture or practices, attributes, elements, and factors.

A comparison of the studies conducted by Jennings (2011) and Suveatwatanakul (2013) lead to development of the knowledge sharing factors analyzed in this research. Jennings (2011) found in her research that four out of five main factors influence knowledge sharing which are: a) The role directly influenced sharing of technical knowledge. b) Culture of origin would have an impact on knowledge sharing due to individuals from diverse cultures shared information differently. c) Technical employees' perceptions of value associated with shared knowledge resources are affected by business procedures to manage knowledge depending on reciprocity, innovation, and other reasons. d) The business process affected their participation in knowledge sharing due to these processes were specific to the application and need being addressed. e) And, media would not affect individuals

that share technical knowledge. On the other hand, Suveatwatanakul (2013) concluded that "the two variables (management practices and motivation) were supported and the six variables (leadership, culture, mission and strategy, organization structure, systems and organizational climate) were significant predictors of tacit and explicit knowledge." This research supported that all factors mentioned by these two authors influence knowledge sharing.

Jennings (2011) suggests to delicately balance the formality of knowledge management with the informality in order to share knowledge freely. An alternative for doing this, would be to incorporate the gathering of the knowledge in the daily work routine, so people can decide what information, when, and with whom, they will share.

On the other hand, Suveatwatanakul (2013) claims that selection and recruitment practices in many organizations have been influenced by people's knowledge, which is a key competitive resource in organizations. Davenport & Prusak (2000) states that "companies hire for experience more often than for intelligence or education because they understand the value of knowledge that has been developed and proven over time". Moreover, organizations value more tacit knowledge or the implicit knowledge obtained from experience that will lead to 'wisdom' in order to add value to their processes, instead of the explicit knowledge that is contained in documented knowledge included in databases and reports. Although the transformation of implicit into explicit knowledge is a significant contribution to sustainable competitive advantage for organizations, however knowledge sharing indeed facilitates organizational learning instead of explicit knowledge alone.

According to Senge (2006), a learning organization is "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together." A barrier to develop the organization as a learning organization is when individuals acquire learning but share nothing with each other. Moreover, Ipe (2003) claims that knowledge sharing consists of sharing vision, values, knowledge, information and communication, with openness and trust.

A model for Non-profit Capacity Building.

The second model is for capacity building by De Vita & Fleming (2001), researchers at the Urban Institute, which is based on topics of civil society, sustainable development, and organizational management to demonstrate how non-profit capacity is related to community capacity (see Appendix F). The non-profit sector is complex and includes many interests and activities such as: employment and training centers, hospitals and universities, museums, child care centers, dance theaters, food banks, art galleries, youth development programs, animal shelters, drug treatment and prevention centers, among others. Some NPOs are large, multi-service and multi-project, while others are small, with only one project. For this reason, their needs and ability to build future capacity varies among them. Capacity building is not an easy simple process (De Vita & Fleming, 2001).

This model uses five components vision and mission, leadership, resources, outreach, and products and services. These components are common in all NGOs and NPOs, especially in the four INGOs investigated, and are interrelated and mutually dependent on each other as a system. Organizations may use one factor

more than others, which might be the case of the INGOs studied (i.e., mission and strategy), but it is necessary for an organization to survive the use of these five components. Each factor represents a possible intervention point for enhancing organizational capacity (see Appendix K). The findings of this study about the mission and strategy of the four INGOs are:

Mission and strategy. The mission of the INGOs studied supports technical knowledge sharing because they work based on their mission which inspire them to share, learn and improve their knowledge in order to do their job effectively to, in turn, fulfill their mission. However, there are differences in their mission statements due to their focus on the main activities that each one of them develop. INGO-1's mission is based on human rights, the second organization's mission is focused on economic and environmental development, the third organization's mission is to conserve the land waters on which life depends, and the fourth organization's mission supports family farming and satisfy food in the world without ecological oppression of the planet.

INGOs need access to critical information in a timely and reliable way, according to the field they work in, to be able to build and share knowledge efficiently, between different offices located in other countries, in order to perform their mission effectively. For this reason, they need adequate systems to support knowledge management, as well as appropriate incentives to increase knowledge sharing. For international NGOs, knowledge sharing may be considered an opportunity to find strength in differences between cultures from other offices located in different countries or between organizations, although according to traditional management approaches, it might be considered a threat (Le Borgne & Cummings, 2009). Knowledge sharing is encouraged between organizations

which are supported by funding agencies (Hurley & Green, 2005). As a result, organizations might transform from a culture of information hoarding to information sharing (Coakes, Amar, & Granados, 2013). One way for an INGO to become successful would be to decrease change resistance by making people feel more secure in their positions, as well as by flattening organizational structures (Holzer et al., 2016).

According to the INGOs studied, the organizational strategy facilitates to share knowledge internally. Nevertheless, there are some differences in the strategy of the four organizations: 1) INGO-1's strategy is based on the institutional capacity building. 2) INGO-2's strategy supports knowledge sharing as well as the exchange of evaluations, questioning, meeting goals, permanently innovation, etc. 3) INGO-3's strategy contributes to the strengthening of the capacities of their partners and the organization in the host country. 4) And, INGO-4's new strategy of working with self-organized groups strongly supports a greater technical knowledge sharing internally.

However, obstacles can constrain knowledge sharing, Jennings (2011) has concluded that the most important are: a) "Power distance" which impacts the communications between genders or subordinate-to-superior. b) The required validation of the information that is shared outside of teams, which takes greater time and effort for the individual sharing. c) Internal competition in both public and private sectors is the last common obstacle. On the other hand, Leonard (2014) states that lack of time or resources can limit knowledge sharing. This author also declares that there are three reasons that causes knowledge hoarding to constrain knowledge sharing, such as insufficient financial incentives, discontent with the

organization and personal ego, which are challenges for managers to face and deal, but they can change with adequate strategies.

In order to fight against the obstacles mentioned above, organizations might offer to their workers some incentives or other options in order to increase their motivation to share knowledge. One way is suggested by Boudreaux (2011) who proposes these actions: 1) Include knowledge sharing as part of the job's functions for employees, to be more willing to share their knowledge (INGOs studied have an organizational culture that supports knowledge sharing); 2) express gratitude and congratulations publicly for their contributions (participants in this study feel that their knowledge sharing is valued by others); 3) establish compensations for people that perform above expectations (recognition the job done by the workers of INGOs of this research stimulates them to share knowledge); 4) improve knowledge management and its content in order to be useful for the organization (respondents on this research state that they can improve their management and performance when they share knowledge and experiences with each other); 5) and, prioritize knowledge sharing activities in order to provide a challenge for teams and recognizing when they succeed (it is very important for INGOs studied to share their knowledge and experiences in meetings, trainings and using other kinds of media).

All INGOs have also suggested the following new sub factors that also influence knowledge sharing but they are not related directly to this model:

Fundraising. They need to have less ambitions or more money in order to have more staff, resources and greater ability to invest in learning and knowledge management. INGOs work together with partners in fundraising activities.

Specialization of the organization. It is better for an organization to specialize in a specific area in order to share specialized knowledge. For example, INGO-4 thinks that coffee and cocoa are similar products and they can learn from the two chains in the same way and the approaches they manage make it easier for them to have the same strategies to work with projects and share the results with others.

It is important to highlight that, according to the Western Australian Department for Community Development (2006), community capacity building encourage local communities to search their own solutions to problems in order to implement and sustain these solutions to develop their capacity. In this way, they control their social, economic, cultural, and physical environments (Graeme, 2014).

Community Capacity Building in INGOs.

Verity (2007) defines community capacity building as the continuous process that allows to promote an appropriate local leadership, which facilitates that communities' members take responsibility for their own development. For The Aspen Institute (2009), community capacity building provides the following eight outcomes which are considered processes and encourage the activities that the organization can help to do or develop with a community which are: a) Expand leadership, b) promote that the community use available resource, c) encourage a shared vision, d) increase the effectiveness in the community organizations, e) foster and inclusive and diverse community participation, f) plan a strategic community agenda, g) facilitate progress toward goals, h) strengthen individual skills.

Then, community capacity building focuses on enhancing community decision making, creating a common vision for the future, building the skills and confidence

of individuals and groups, creating change by implementing adequate strategies, and promoting problem solving processes, inclusion and social justice.

According to Nikkhah & Redzuan(2010), NGOs have many important roles related to community capacity building, such as helping to develop community capacities through capacity building, improve the abilities, skills, and knowledge to mobilize resources on communities, helping them to plan and evaluate projects. Other benefits are mobilizing communities to be self-reliant, helping communities to rely on their own resources and discover their potential, providing advice to help them solve their problems, helping community members to improve their economic situations through microfinance, assisting program participants to plan community activities, and improving the quality of their lives by motivating communities to participate in projects.

The aim should be to empower communities through sharing knowledge, so that they can make better decisions about their development and their environment. By applying this concept of community capacity building in INGOs, when people are empowered and share knowledge, they may improve their organizational performance by making better decisions, using media to share their knowledge with others within and outside the organization.

Besides, the factors that influence knowledge sharing related to Community Capacity Building in INGOs are:

Perceived value of knowledge sharing. All INGOs participants in this research value technical knowledge sharing for different reasons: a) It is part of their work and motivates them to learn. b) They value according to each one's contribution from their role, although their contribution is not the same. c) They pretend that their work be known by others. d) They consider it as basic to be able to do their

job. "Technical knowledge sharing is valued in our organization and always try to take our knowledge and experience to other places."

Besides, in relation to knowledge resources, their thoughts are: An organization considers that technical knowledge resources do not have to be improved but lived, but the others think that these resources can be improved due to they are perfectible and not static, because the media evolves and needs to be updated. All of them also value technical knowledge resources due to without them it would be not possible to share knowledge. "I value technical knowledge resources of my organization because I cannot work without them. If I do not have computer, or access to information, or knowledge sharing, or mobility, or the implements I need, then how can I do my job?" Similarly, technical knowledge that most of them share is valued by others within their organizations, because they give the confidence for people to talk and share their ideas, emotions, personal problems, trying to listen to others their dreams and problems which are part of the organizational coexistence. "I feel valued when I get feedback from the organization and also through evaluations."

Jennings (2011) found in her study that her respondents value knowledge resources for three reasons, reciprocity, enabling innovation, and "All the stuff that comes with it!" Reciprocity is one cause to motivate to sharing their knowledge, which triggers the expectation to receive it from others in order to share it again. This reciprocity can also be fostered when they use the knowledge resource through contribution and inquiry. Innovation may be an outcome of the information contained in the resource as well as enables personal career growth for individuals. "All the stuff that comes with it!" was replied by participants and can be found in the knowledge resource as alternative uses. Workers value a knowledge resource

when the use of it is required, who can obtain unintended benefits through the use of a knowledge resource.

Innovation may also enable successful business operations which means that planned return on investment might be greater for providing knowledge resources. Moreover, the value of perceived effectiveness for shared knowledge increases from individual, group, and to the whole organization, and usually is greater for the working group (Becerra-Fernandez, Gonzalez, & Sabherwal, 2004).

Media used for sharing information. All four INGOs use media to support technical knowledge sharing within and outside the organization. The media that is most used by these organizations includes email, telephone, Skype and websites to communicate within and with their stakeholders. They also use different media to share technical knowledge with others: a) INGO-1 uses face-to-face meetings and training events. b) INGO-2 uses virtual conferences, WhatsApp, visits, workshops / meetings, official communications, and reports/presentations to share knowledge. c) INGO-3 uses social media occasionally. d) And, INGO-4 uses Facebook, Yammer, Twitter and LinkedIn. The frequency of media used by INGOs is different: a) INGO-1 uses email daily and Skype monthly with their headquarters, telephone and WhatsApp when Skype does not work, face-to-face meetings and training events at least once a year. b) INGO-2 uses Skype or email to communicate with the headquarters, share point, blue cloud and meetings in person to share knowledge and information which frequency depends on the specific topic to be treated. c) INGO-3 uses email, web and Skype more often than social media, telephone, face-to-face meetings and training events. d) And, INGO-4 uses their Web page, Facebook (2-3 times per week), Yammer, Office 365 (daily and permanent), and email (daily and permanent), occasionally Twitter to

communicate with the headquarters, LinkedIn occasionally, Skype every day. INGO-1 and INGO-3 have computer systems: The former's platform supports the ordering, structuring and organization of information while the latter uses technical, administrative and financial computer systems.

Jennings (2011) found in her research that media does not affect an individual's sharing of technical knowledge. Nevertheless, she states that this result might vary with other kind of respondents because her study was conducted with computer experts. They also expressed that they preferred to meet face-to-face to share knowledge followed by telephone, and email. The respondents said that they feel more comfortable when they share technical knowledge that is cannot easily be duplicated and shared further than intended.

On the other hand, Bhattacharjee & Bhattacharjee (2017) argue that, besides the roles described before, NGOs promote sustainable development by balancing the social, economic and environmental factors. Besides, local communities can gain more power to make their own decisions as the result of decentralization of the central government. However, sometimes local communities do not have the resources they need to develop or implant specific projects. In this case, the central government provides the policy for NGOs to create and execute sustainable development plans. Moreover, sustainable community development is process-oriented, which means that an extensive community participation is required as well as sharing resources, knowledge and expertise through networks in order to achieve their development objectives by balancing between environmental concerns and enhancing local social relationships.

Bhattacharjee & Bhattacharjee (2017) also state that capacity building is an important NGO's strategy that facilitates sustainable community development as

well as is an approach to development that builds independence, which can be: a) A 'means to an end', with the purpose that others participate in programs. b) An 'end' in itself, with the goal of promoting teamwork between individuals and government departments in order to solve problems. c) A process, with the intention of integrate capacity building strategies in their daily practice effectively (NSW Health Department, 2001).

Capacity building refers to identify pre-existing capacities related to skills, structures, partnerships and resources. Frankish, Kwan, Quantz, & Flores (2003) has identified these elements, such as: Financial capacity (knowledge, opportunities and resources), human resources (skills, confidence, motivations, and relational abilities and trust) and social resources (participation structures, networks, shared trust and bonding). UNDP (1997) has defined capacity building as "the process by which individuals, groups, and organizations increase their abilities to 1) perform core functions, solve problems, define and achieve objectives; and 2) understand and deal with their development needs in a broad context and in a sustainable manner."

Furthermore, Langran (2002) has defined capacity building as "the ability of one group (NGOs) to strengthen the development abilities of another group (local communities) through education, skill training and organizational support. Capacity building is an approach to development not a set of pre-determined activities."

It is not easy to build capacity. In this context, NGOs have the role as capacity builders to help the community to develop the awareness and resources, promoting their participation in projects and improving their quality of lives. As a result, empowerment is one of the outcomes of community capacity building especially

at individual level which can increase resources and opportunities in wider social structures and processes (Verity, 2007). For this reason, building community capacities and fostering empowerment facilitate to achieve sustainable community development better than programs and the use of indicators (Mobbs, 1998; Harrison, 1998).

Finally, the Capacity Building NGOs have proved that it is an instrument for communities to gain an invaluable experience in helping them to move towards empowerment among community members, and also community sustainable development.

SECI model of knowledge generation.

Nonaka & Takeuchi (1995) argue that there are two types of knowledge, tacit and explicit. The former is a heuristic rule, generated empirically and kept by the organization's employees. Thus, it is more difficult to transfer, and it can be easily lost within the organization (see Figure 12). In contrast, the latter is a scientific "rule". Explicit knowledge is easier to transfer between employees and within and outside an organization (Hussain & Shamsuar, 2013).
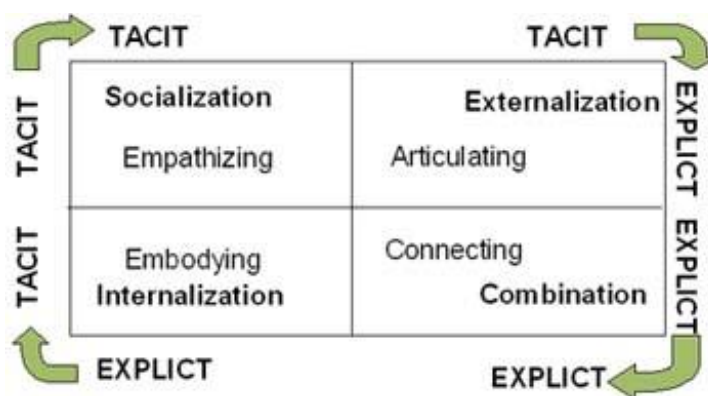
Figure 12. SECI model of knowledge generation
Note. Retrieved from "*The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation",* Nonaka, I., & Takeuchi, H., 1995. New York: Oxford University Press, 1st ed.

Nonaka & Takeuchi (1995) establish four types of knowledge creating process. This process engages both the tacit and explicit knowledge, not just one of them. It is a continuous, self-transcending process where individuals transcend the boundary with each other when knowledge is created between individuals or between individuals and the environment. It works by linking these two types of knowledge in the organization (AllKM, 2016).

Socialization. Links tacit to tacit knowledge. As a result, new knowledge is created throughout the process of interactions, observation, discussion, and analysis, when people live in same environment. This stage consists of share experiences to turn them into new knowledge. Organizations can gain new knowledge by interacting with outside stakeholders. Traditional environments with relatives that train each other based on their experiences rather than a formal education, is a typical example of this socialization.

Externalization. Links tacit to explicit knowledge. It converts tacit knowledge into new knowledge which is crystallized when it comes out of its boundary and is shared with the collective group. For example, when employees share their knowledge with others in order to improve or solve the process related problems within quality circles in manufacturing sectors.

Internalization. In this stage, tacit knowledge is transformed in explicit knowledge which is shared across the organization. This process generates a learning spiral of knowledge creation if tacit knowledge is practiced by individuals. Organization tries to innovate or learn when this new knowledge is shared in Socialization process.

Combination. In this last stage, explicit knowledge is transformed into explicit knowledge. For instance, when the finance department consolidates all financial reports from other departments and publishes an annual financial performance report. Other examples are by using a database to get business report, sorting, adding, and categorizing.

This model can be applied to the four INGOs studied, based on the findings of this research, in this way:

Socialization. Some INGOs use Microsoft Share Point to create websites as a secure place to store, organize, share, and access information from any device. Much of this information is useful and facilitates knowledge generation and sharing for the organization. Other INGOs organize events at least once a year for training and accountability, developing joint strategies, commenting on how the organization is, and how they face the challenges. In these meetings and events, they create new knowledge through discussion, analysis, interactions, observation, and sharing information and experiences, as well as by interacting with outside stakeholders.

Externalization. Some INGOs organize international events yearly with external trainers who share their knowledge and experiences with other members within the organization. In other meetings and trainings, they generate agreements and commitments by replicating, investigating, deepening, and multiplying the know-how that was jointly constructed. Some INGOs make a reading of local development by using diagnostic or situational analysis to share their knowledge with others, in order to help communities or partners to solve their problems. Other INGOs promote building learning communities for connecting people, setting

goals and measuring collective progress, enabling shared learning, and deepen collective knowledge. One organization use Blue Cloud, which is an approach developed by IBM, to share infrastructure and provide services that automate fluctuating demands for IT resources.

Internalization. These NGOs provide training programs to their employees, who internalize the tacit knowledge and try to create new knowledge as a result of this process. For some INGOs, one key factor for the construction and internalization of knowledge is people's attitude. For this reason, they treat people with respect, dignity, valuing their knowledge, understanding their reality and context (endogenous factors).

Combination. These organizations have a web page that contains all mandates, guidelines, world codes and program's results that the headquarters communicate to internal and external people. Other INGOs use technical, administrative and financial computer systems to manage information and create reports for decision making. And others publish periodically in magazines, their outcomes of project's implementations and other important news and information in order to share the activities performed by these organizations with the rest of the world.

There are four factors investigated related to this model:

1) *Organizational culture.* The question about how does the organizational culture affects technical knowledge sharing, is not easy to answer. In first place, there is not a clear definition of technical knowledge sharing for the four INGOs that participated in this research. For INGO-1, it consists of an exchange of knowledge with each other, in which they start from the exercise of listening to people to understand their reality and in that context raise questions mobilizing to make their own people to build new knowledge, new practices, and learning together. They

also generate new knowledge to evolve and to be able to continue advancing. They make a diagnosis to identify the strengths and weaknesses and what things are necessary to work, as well as if they require internal or external training or only accompaniment. Accompaniment and training are also considered as technical knowledge sharing. The only resource they need is time (Time management) in order to share more knowledge with each other.

In second place, most of INGOs have different types of culture. INGO-1, INGO-2 and INGO-3 have a dynamic and entrepreneurial, and results-oriented organizational culture. INGO-2 and INGO-4 have a family oriented as a predominant type of organizational culture. INGO-4 would like to have a more entrepreneurial approach because if they are dynamic and able to adapt to new ideas and approaches, they can make new alliances with other organizations. INGO-2 establishes accompaniment, coaching and good information as key elements for sharing knowledge while another focus on time management and human resources policy as the most important elements to share technical knowledge with others. INGO-2, INGO-3 and INGO-4 have stated that there are other sub factors (time management, sense of belonging, human resources policy, accompaniment, coaching, good information, and learning culture) that should be considered in order to share knowledge effectively. This means that individuals within different organizational cultures, share information differently, which contributed to the overall research.

Moreover, Jennings (2011) concluded in her study that workers from a diverse culture of origin were adaptive to cultural diversity. She also stated that culture of origin did have an effect on knowledge sharing due to the negative and positive

impacts on knowledge sharing for their personal culture of origin and the others' differing cultures.

On the other hand, many scholars think that knowledge management (KM) has facilitated the creation, storage, sharing, and application of knowledge in organizations in the last years. Practitioners have cited that knowledge management practices are the issue of organizational culture. Other studies argue that the issue of organizational culture's influence on knowledge management success.

The organizational culture, also called corporate culture, can be understood as "the values and behaviors that contribute to the unique social and psychological environment of an organization." (BusinessDictionary, 2017c). It includes the values, philosophy, experiences and expectations all together of the organization, which is expressed in its interactions, self-image and inner workings. It is based on tacit and explicit knowledge, customs, shared attitudes and beliefs, which have been developed over time and accepted by the organization. It's shown in:

a) The flow of power and information through its hierarchy.

b) The commitment of employees to achieve collective objectives.

c) Support in developing new ideas, personal expression, and freedom in decision making.

d) How the organization conducts its business and behave with the stakeholders.

Janz & Prasarnphanich (2003) states that "organizational culture is believed to be the most significant input to effective KM and organizational learning in that corporate culture determines values, beliefs, and work systems that could encourage or impede knowledge creation and sharing." Other authors think that intellectual resources increase sustainable competitiveness due to they are part of

the organizational assets (Drucker, 2009; Teece, 2003; Hansen & Oetinger, 2001; Wenger & Snyder, 2000). As a result, when organizations are able to effectively manage their knowledge resources, they can reap the benefits of improving the development of new products, customer service, innovation and increase corporate agility, reduce costs in people and infrastructure, make an efficient problem resolution and better decision making, and best practices transfer (Davenport, De Long, & Beers, 1998; Skyrme & Amidon, 1998; Hansen & Oetinger, 2001; &Stata, 1989).

INGO-1 has an organizational culture based on values which facilitates respect, tolerance, participation and living a culture of rights, in order to understand the walls that technicians have to cope to deal with the cultural factors of people internally and externally. In this way, they do not look at people as a container of knowledge, but they have different knowledge to share. All these values inspire them to share information and experiences, as well as learning by attending workshops and by monitoring partners reflexively, which means a true knowledge sharing for them. In this way, the organizational culture facilitates knowledge sharing in INGOs. Besides, these values are like norms or rules to follow by the organization's members.

According to Gold, Malhotra, & Segars (2001), there is a relationship between some organizational values, KM capabilities and subsequent organizational effectiveness. They express that organizations with a culture based on values are predisposed toward constructive knowledge behaviors and sharing insights with each other. They also argue that these values may influence organizational abilities to innovate, as well as to be adaptive to change and to be responsive to demands due to they are part of the knowledge infrastructure capability. De Long & Fahey

(2000) claim that some value orientations can facilitate or hinder knowledge sharing.

INGO-1 has an organizational culture based on values which facilitate respect, tolerance, participation and living a culture of rights, in order to understand the walls that technicians have to cope to deal with the cultural factors of people internally and externally. Therefore, the organizational culture facilitates knowledge sharing in INGOs. Among these values, collaboration, openness and trust can increase willingness among members to share insights and expertise which can lead to knowledge contribution and sharing, innovation and efficiencies due to what are considered "good" values that reinforce positive KM behaviors. For instance, INGO-1 has an organizational culture that facilitates respect, tolerance, participation; based on these values, they live a culture of rights to comprehend the walls that technicians have to cope and to understand the cultural factors of their partners with target groups. In contrast, "bad" values will lead to dysfunctional KM behaviors; for example, individual power and competition can cause knowledge hoarding behaviors, with undesirable outcomes such as inefficiencies. All four INGOs think that people´s attitude is very important to motivate others to share their knowledge; for instance, organizational climate and daily work sometimes might influence their attitude in a negative way due to the workload. For this reason, organizations should reinforce cultural values that support knowledge sharing behaviors. In this way, this research extends the KM notions of organizational culture as either facilitating or making knowledge sharing difficult, by identifying key organizational values and how these influence knowledge management behaviors.

Another study conducted by Jarvenpaa & Staples (2001) shows that shared organizational values might influence individual's perception of ownership of knowledge and willingness to share knowledge, which leads to greater use of collaborate media to share information. This is the case of the INGOs studied that use different kind of media to share knowledge and information within and outside the organizations. See Figure 13.
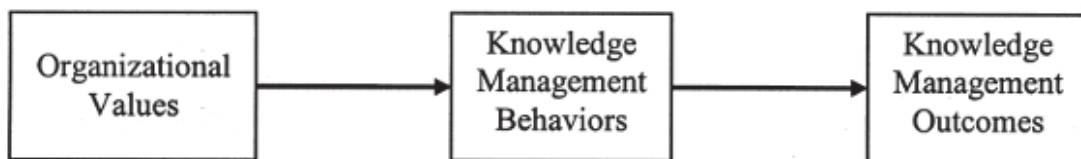
Figure 13. Conceptual Model: The relationship between organizational values, behaviors and outcomes
Note. Retrieved from "An Empirical Examination of the Influence of Organizational Culture on Knowledge Management Practices", Alavi, M., Kayworth, T., & Leidner, D., 2005. *Journal of Management Information Systems*, 22(3), 191–224.

INGO-2, INGO-3 and INGO-4 have also suggested these new sub-factors that also influence knowledge sharing including:

Time management. The organization execute projects, which requires a lot of time to generate knowledge management with their counterparts. They have many things to do and little time for technical knowledge sharing. For this reason, it is necessary to improve time management to be an effective tool that let them to achieve their goals.

Sense of belonging. It is important to feel a sense of belonging of each one to the team, which facilitates their engagement and involvement in the group.

Human resources policy. This is a relevant topic because sometimes the human resources policy does not compensate for individual performance but it might motivate workers to share knowledge throughout training and job exchanges in

other countries, which form part of personal growth. The decision to include knowledge sharing as part of the institution's policies is key.

Accompaniment. It allows that the members of the organization share knowledge with other workmates and partners through supporting them to improve their jobs and achieve the expected goals.

Coaching. It includes a focus on people's needs and accomplishments through a closer observation, and impartial and non-judgmental feedback on their performance on traditional training methods in order to make them to get involved in knowledge sharing.

Good information. It is a key input that should be useful and valuable for organization's members in order to facilitate knowledge sharing among them.

Learning culture. A learning culture orientation in the organization through the collection and application of values, practices, conventions, and processes might encourage workers to create and share knowledge, which will lead to be a more competitive organization internally and externally. Besides, continuous learning can influence each other and provides an environment to develop and transform continuously for the better.

2) *Organizational climate and motivation.* All four INGOs have an organizational climate that supports knowledge sharing. Although all of them have a people-oriented climate, there are some differences in the mixed organizational climate between them: INGO-1 is only people oriented. INGO-2 and INGO-3 have a mixture of the four types of organizational climate: people oriented, rules oriented, innovation oriented and goal oriented whereas the last organization is people oriented, innovation oriented and goal oriented. Moreover, all of them state that

people's attitude is important for an effective knowledge sharing. A good people's attitude is required to follow the rules.

There are also differences in how the four INGOs interpret people's attitude: INGO-1 think that they can improve people's attitude by treating them with respect, dignity, valuing their knowledge, and understanding their reality and context. INGO-3 values these attitudes: being proactive and willing to debate, listening and creating knowledge, but the daily work sometimes influence their attitude due to the workload. INGO-4 claims that one way is valuing the real contribution of people that increases the effectiveness through knowledge sharing. And INGO-4 emphasizes on willingness and openness to share technical knowledge and information and provide their feedback as the employees' desired attitudes.

Suveatwatanakul (2013) found in this study that leadership and organizational climate are factors that influence knowledge sharing. He argued that both variables are significant predictors of learning organization outcomes, tacit and explicit knowledge and organizational performance. Based on these results, he concluded that both variables play an important role in knowledge sharing.

According to Hellriegel & Slocum (2008), leadership is related to employee satisfaction and also to organizational effectiveness. They suggest three measures of job satisfaction that include interpersonal relations, group cohesiveness and task involvement. Frederiksen, Jensen, & Beaton (1968) establishes that organizational climate is related to task performance and to greater productivity. Other authors claim that organizational climates support knowledge sharing in organizations.

All INGOs have also suggested as a new sub-factor that influence knowledge sharing:

People's attitude. The attitude of people is very important to motivate others to share their knowledge. It is part of the organizational climate and might motivate to share knowledge with each other. Their attitude can be perceived by others as proactive, willing to debate, opened to listen and create knowledge, etc. However, organizational climate and daily work sometimes might influence their attitude in a negative way due to the workload. For effective knowledge sharing, there must be a real contribution of people, the institution and the society. They are an entity that facilitates processes that seek to be translated into results, not only to know other methodologies but also to be able to handle processes by sharing the knowledge that is developed in other countries. Another attitude is the willingness to share and receive information. For example, when conducting an internal workshop to share information about knowledge techniques, it may occur that the communication is not adequate, the type and content of the message may not be attractive to participants or may cause their loss of interest, all of this difficult in knowledge sharing and the learning process. There must also be room for them to receive the information with openness and provide their feedback.

3) *Role in organization.* INGO-1 stated that this organization contributes to knowledge sharing but not to knowledge transfer. Then, a difference between these two terms has emerged. Practitioners state that although knowledge sharing and knowledge transfer have been used as synonymous, there is a blurry difference between them. Chou & Tang (2014) have concluded in their study that their "results reveal knowledge transfer emerged earlier and has a more general scope that covered multidisciplinary subjects and knowledge sharing is more focusing on the knowledge management context and more specifying the application of information systems." In this context, they share knowledge and also mobilize one

another. Mobilizing means provoking everyone to think, understand, deepen, mobilize mentally to new dimensions, and provoke actions to investigate. It can be learned in any context, for example, talking about and sharing knowledge while drinking coffee with technicians for exchanging ideas and learning from each other. It incites, mobilizes, moves, receives, and questions facts to incite the way of looking at things, so this dynamic process facilitates knowledge generation and sharing.

INGO-2's participant shares technical knowledge in their role in many ways, such as throughout learning communities, in meetings and debates, advising strategically to partners, publishing documents, uploading information, etc. They use the participatory methodology throughout questionnaires and dissemination of previous documents to analyze and discuss them in meetings, depending on the topic. Another way to share technical knowledge is using other available resources, such as software, web page, contacts, etc. They share it in various ways, through processes that have the ability to train people with external actors who share their knowledge and experiences. They also share explicit knowledge in the way of documents, procedures, policies (rules), etc. When sharing information or reflecting on each other, it is a process where they transfer the information and know-how so that it is useful for others. It is a process where knowledge is being explored, constructed, generated and shared with the subjects within and outside the organization.

INGO-2 and INGO-4 have considered that they have impact on knowledge sharing strategically through their role, because of their responsibilities as directors or coordinators. This means that their role highly influenced knowledge sharing. For example, directors consider themselves as guides, tutors and a support for their

technicians, so they share guidelines and feedback about specific topics with their teams. Sometimes, people call them to solicit ideas and support from them. Other times, partners or workers from other branches in other countries invite them to participate to share their results with them. The reasons for which they share knowledge are: a) Because they feel good with themselves, b) others perceive that they are doing well the work that is required, c) it is their responsibility to share what they know and do, and d) their role is to communicate the organizational decision of how they do things and based on this sharing everyone will win.

The INGO-2, INGO-3 and INGO-4 studied the claim that they have access to most of information in their organizations. However, INGO-2 is on the way to open the access to information to partners, at internal, continental and world level; all employees have the access to information and guidelines. All INGOs considered that they can access the information they need in order to do their job effectively.

On the other hand, Jennings (2011) concluded that the respondents in her study answered that their role directly influenced sharing of technical knowledge in different ways, such as the information they share, the individuals with whom they share information, the human interaction on which knowledge sharing depended on, fulfilling their job responsibilities, and ensuring that others' fulfill their responsibilities.

4) ***Organizational structure.***   All four INGOs have a geographic type of organizational structure.   However, all four INGOs have different types of organizational structures: a) INGO-1's structure is geographic and contextual which develops a single criterion in each country by analyzing the different local contexts. b) INGO-2's structure is decentralized and geographical which supports the transfer of technical knowledge. c) INGO-3 has a geographical, goal-oriented

and centralized structure for Latin America, but also a decentralized structure at the global and national levels. d) INGO-4 is going from a centralized organization towards a geographic structure but this organization is in the process of working in clusters at international level, and this current structure supports technical knowledge sharing within the organization. Most of INGOs are organized with the headquarters, board of directors by region, a regional direction, national directors in each country and projects. Besides, INGO-4 has groups that work in clusters to evaluate the advance toward the results, which can share more information across all of them, such as cocoa, coffee, rice and food smart cities. In Ecuador, there are three clusters (except rice).

Technical knowledge sharing helps to build capacity in INGOs in different ways (Kaplan, 2010):

a) The organizational structure supports that communication flows freely and that individuals understand their role and responsibility. For example, documents, procedures, policies (rules), etc, can flow within the organization. INGOs studied have structures facilitate knowledge sharing in all levels within the organization.

b) The organizations' understanding of the conceptual framework about the world allows them to locate themselves within that world, and to make appropriate decisions in relation to it. INGOs studied recognize that knowledge is an important asset that they have. "Without updating and improving what we know and do, our organization would have already died." "If we do not do projects that show innovation, opportunity, relevance and impact generation, our organization could not be alive." "What we propose to do, makes things better." For example, INGO-4's decision to strengthen the capacities of the working partners facilitates for the organization to make connections and identify sources of information and funding
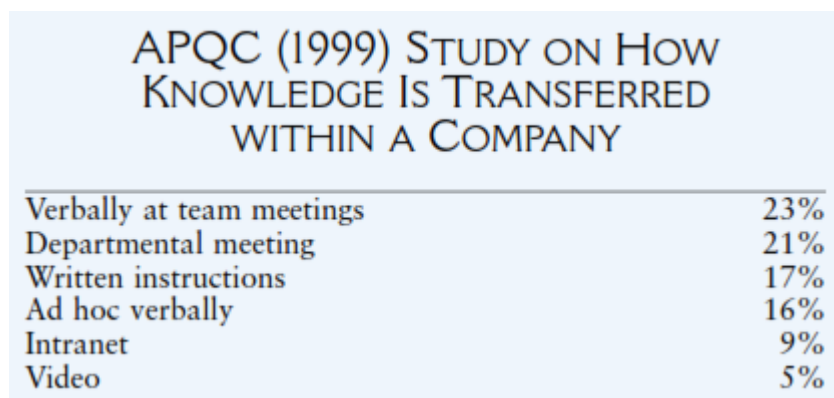
in order to share this knowledge with the offices in other countries. What happens in another country can be shared but each dynamic is different. Having knowledge that could be shared, implemented and used by others is important to build capacity in the organization. Once they share knowledge with other people, there might emerge different approaches that nourish and strengthen these organizational and individual's capacities.

c) Organizational attitude allows organizations to view themselves and act as active actors that conduct their members to effect change and progress instead of behave as victims. The environment and INGOs in various countries evolve in a fast way. Therefore, they must adapt to the changes to increase their competitiveness. "Without knowledge, there is no institution." "Everything we know and do, builds capacity."

d) Vision and strategy lead organization's understanding of how to accomplish their mission. The four INGOs use their strategies to fulfill their vision and mission, which also support knowledge sharing.

Capacity building and capacity development are terms that have been used interchangeably. Nevertheless, other authors think that capacity building does not include people's existing capacity while capacity development recognizes existing capacities which require improvement. Kaplan (2010) claims that organizational capacity development involves to build tangible and intangible assets. He argues that INGOs must first focus on developing their organization in order to work efficiently and effectively in a developing country. This author also states that capacity building in organizations should first focus not only on intangible qualities but also on tangible qualities, such as skills, training and material resources.

Capacity building is the process in which individuals and organizations obtain, improve, and retain the skills and knowledge needed to do their jobs competently.

In knowledge sharing in a community includes the evolution of improving ways of doing things, or lessons learned, which is learning from both successful and unsuccessful events. According with a study conducted by the American Productivity and Quality Center (APQC) shows a process from the beginning how a good idea can evolve and be transferred within Communities of Practice (CoPs) with the purpose of being incorporated into the organizational memory or knowledge repository. Results of this study confirm that INGOs agree with this process, since these organizations search for information and knowledge using different ways (for example, pedagogical documents, reports, studies, reports, evaluations, etc.), in order to find information easily and then they evaluate, validate and transfer knowledge with others, who review it, use it and find routines in their jobs (APQC, 1999). Jarrar & Zairi (2000) argue that the knowledge-sharing processes involved include searching, evaluating, validating, implementing (transferring and enabling), reviewing, and finding routines.

APQC (1999) STUDY ON HOW
KNOWLEDGE IS TRANSFERRED
WITHIN A COMPANY

Verbally at team meetings	23%
Departmental meeting	21%
Written instructions	17%
Ad hoc verbally	16%
Intranet	9%
Video	5%

Figure 14. Study on how knowledge is transferred within a company
Note. Retrieved from *"Study on how knowledge is transferred within a company"*, American Productivity and Quality Center (APQC), 1999.

Figure 14 shows the results of a study conducted by APQC (1999) where it can be observed organizations shared and transferred knowledge through best practice. These results show that 51% of knowledge sharing occurred through a formal or explicit process within the organization, while 39% was more tacit, and 10% were never shared. In the case of INGOs studied, they share knowledge internally mostly in a formal or explicit way (for example, in meetings, trainings, reports, etc,) and a little part is not shared.

This type of flaw in knowledge sharing is like a black hole where knowledge is received but nothing is ever sent out. For this reason, the technique called Social Network Analysis (SNA) is used to identify this knowledge hoarding. In addition, there are different types of exchanges that occur in knowledge sharing, such as requests, modifications, revisions, or some kind of publications, reuse, repackaging, reorganization, references, or recommendations. Moreover, reuse is a good proof of the success of knowledge sharing through references and citations of the sources and it can be measured through a citation index, and it can even be tracked in a knowledge management system, which should include information about the people who produced the knowledge as well as who will make use of it. Some organizations evaluate how much knowledge their employees share.

Technical knowledge sharing is the transfer of knowledge and use of skills of people within and outside the organization. One way of technical knowledge sharing is to search how to share business and socio-administrative knowledge to the organization and to the partners of the organization. The technical team is trained by an external consultant on different topics. Accompaniment and training are also technical knowledge sharing.

On the other hand, regarding sharing knowledge external to the organization, knowledge-sharing communities go beyond that, not only about providing access to data and documents, but also interconnecting the social network of people who generated the knowledge. In this way, talking to people experienced in using knowledge is as much valuable as when talking to the original authors or experts. When knowledge is visible, knowledge sharing can be facilitated. Visible interactions can make the knowledge more visible, for example: "I know that you know *that*" and "I know that you know that I know *this*." Visible interactions also facilitate to create a mutual awareness, accountability and engagement to join closely group members. In other words, knowledge and information must be made publically available to others in order to be shareable.

Summary

In this chapter, three models have been reviewed that contribute to analyze Capacity Building in INGOs and Knowledge Sharing, taking into account the approaches of the INGOs studied about these topics. In addition, a discussion of findings was exposed, based on the answers to the research question and sub questions regarding to the nine factors investigated in this study, which were contrasted with the literature review in order to explain the results.

CHAPTER 6

CONCLUSIONS

Introduction

This chapter addresses the conclusions about the topics treated in this document. First, the factors investigated in the four INGOs studied. Second, capacity building in INGOs. Third, learning organizations. Fourth, knowledge sharing in INGOs. And fifth, the three models studied. Finally, the implications for future practice are exposed in order to suggest some actions for INGOs to put into practice to improve knowledge sharing in their organizations as well as some future research to deepen in some specific aspects related to the fields of capacity building, knowledge management and other related topics in the INGOs participants in this research.

Conclusions

Research question

All participants' responses of INGOs did provide direct contribution to this research question "What factors influence technical knowledge sharing in INGOs in Ecuador?" The answer is that all nine factors investigated influence technical knowledge sharing in INGOs located in Quito, capital of Ecuador.

The findings of the four INGOs studied were:

The nine factors investigated and identified from the Literature were supported by the results which were the basis for the research question of the study, such as: organizational culture, role in organization, procedures for managing knowledge, perceived value of knowledge sharing, media used for sharing information, management practices, organizational structure, mission and strategy, and organizational climate and motivation.

Additionally, 17 additional factors emerged from the interviews in the Ecuadorian context, these are label as sub factors corresponding of four of the nine factors, such as: time management, sense of belonging, human resources policy, accompaniment, coaching, good information, learning culture, adequate systematization, constant and effective communication, adequate channels of diffusion, context analysis, technology management, resources management, support of the authorities, fundraising, specialization of the organization, and people's attitude.

Coming up next, there are the conclusions of each one of the nine factors studied that emerged from the literature review, including the 17 new factors that appeared from the participants which extended the understanding of each one of factors investigated.

1) Organizational culture.

There might be either multiple local cultures that influence KM practices or a single dominant organizational culture driving KM decisions, choices and outcomes within an organization.

INGOs have different types of organizational culture ranging from like a family, dynamic and entrepreneurial, results oriented, to structured and controlled. This means that individuals within different organizational cultures, share information and knowledge differently, which contributed to the overall research. For example, INGO-2 has a mixed culture between dynamic and entrepreneurial, and results oriented. "We have had to structure ourselves in an efficient and effective way by using flowcharts to define responsibilities. We have a system driven by financiers or investors. For instance, we want to reach our beneficiaries with an increased income." On the other hand, for INGO-4 affirm that "at the moment, this organization has a culture combination between familiar 40%, structured and

controlling 40%, and results oriented 20%. We need to have a more entrepreneurial approach but I do not think it is reflected in culture but if we are dynamic and able to adapt to new ideas and approaches, then we would search for alliances with other organizations."

New sub factors have emerged, such as: Time management, sense of belonging, human resources policy, accompaniment, coaching, good information and learning culture. These sub factors should be considered in order to share knowledge effectively internally and externally. According with respondents, all these sub factors can also influence knowledge sharing (KS) because they may motivates that people share a knowledge in different amount, depending on how they feel and the circumstances or issues they face. For INGOs 3 and 4, a good time management is crucial to do their job and share knowledge and information efficiently. For INGO-3, the sense of belonging let people be more engaged and committed than others not only with their jobs but also with sharing what they know with each other to improve their work, which facilitates to create a positive organizational culture perceived by everyone; they also think that human resources policy deals with all sides of employee relations, which are rules and guidelines for the organizations to hire, assess, train, and reward their workforce; when these policies support training, employees can learn new knowledge to share it with others and apply it in their jobs to foster a learning culture. INGO-2 provides accompaniment which can be understood as support or advisory to their stakeholders in order to share their experiences with each other to achieve the goals programmed in projects. This organization provides coaching to their employees due to it has numerous benefits, such as: working more easily and productively with others; communicate more effectively; connecting, learning and sharing ideas and

experiences to grow within the company. INGO-2 think that knowledge sharing facilitates for stakeholders to obtain the essential information that they need in order to make available their own information and knowledge among them.

2) **Role in organization.**

INGOs participants share technical knowledge in their role in many ways, such as throughout learning communities, training, in meetings and debates, advising strategically to partners, publishing documents, uploading information, using software, web pages, social media, email, contacts, etc. It is a process where knowledge is being explored, constructed, generated and shared with the subjects within and outside the organization. All INGOs considered that they can access to the information they need in order to do their job effectively. All of this means that their role highly influences technical knowledge sharing.

3) **Procedures for managing knowledge.**

Most of INGOs studied (INGO-2, INGO-3 and INGO-4), have procedures defined for sharing technical knowledge through follow-up sessions of the actions performed, as well as the joint and external evaluation that is socialized in the team, collective training processes, among others. Procedures describe how, when and to whom knowledge and information will be shared within and outside the organization. The information that is expected to be shared is treated in two ways, internally (within the organization) and externally (with other partners). Procedures and processes encourage members of the organization to share valuable knowledge in a formal way.

4) **Perceived value of knowledge sharing.**

Technical knowledge sharing is highly valued in INGOs as well as their resources are valuable to them as it is a very important instrument for them to be able to do

their job. For example, the fact that everyone asks for more time and flexibility to discuss certain topics and ask for training shows that it is highly valued

5) **Media used for sharing information.**

INGOs use media to support technical knowledge sharing within and outside the organization, such as email, telephone, Skype, websites, face-to-face meetings, training events, virtual conferences, WhatsApp, visits, workshops/meetings, official communications, reports/presentations, and social media like Facebook, Yammer, Twitter and LinkedIn. However, the frequency of media used is different, in which the most used are: email, telephone, WhatsApp, Skype, face-to-face meetings and web sites. An INGO uses more frequently Facebook, Yammer, Office 365 and email. Most of INGOs have technical, administrative and financial computer systems.

Nevertheless, some obstacles for sharing knowledge are language and cultural differences. For this reason, some INGOs have decided to organize their work by regions, each one of them includes several offices located in different countries in order to improve the facility of programs and projects replication because they are in a more related cultural field at the regional level.

6) **Management practices.**

Technical knowledge sharing improves managerial practices in organizations due to administrative and technical areas complement each other because the first supports the second. Technical is to do the field work while the administrative supports to do the field work.

The main organizational practices employed by INGOs are (see Appendix R): a) An adequate systematization by defining a strategy to implement knowledge management which consists of having a system of learning communities and share

point where they define how and what is shared and everyone socializes knowledge and information. b) Constant and effective communication using a clear language. c) Adequate channels of diffusion through appropriate tools to facilitate sharing knowledge properly; for example, email, social media (Facebook, Twitter, LinkedIn), Skype, corporate website, computer systems, Yammer, among others. d) Context analysis to provide a deeper insight about how people share their knowledge within the organization. e) Technology management is a major knowledge-sharing enabler due to the increasing importance of information technology in knowledge sharing over time because of the advancement in technologies (Mitchell, 2008). f) Resources management, especially human resources management (HRM) practices, allows the commitment and willingness of employees to share their knowledge and information with others, which contribute to knowledge generation and innovation (Camelo-Ordaz, García-Cruz, Sousa-Ginel, & Valle-Cabrera, 2011). g) The support of the authorities or managers within the organization allows to develop its social structure as well as to improve the organizational current practices in order to driving knowledge-sharing effectiveness (Al Saifi, Dillon, & McQueen, 2016). They generate knowledge and share it through the organizational culture. These general organizational practices are adopted and adapted locally by all members of the organization.

7) **Organizational structure.**

All four INGOs have a geographic organizational structure since they have offices in several countries. Although they have different types of organizational structures (contextual, centralized/decentralized and goal-oriented), all of them support knowledge sharing.

Technical knowledge sharing helps to build capacity in INGOs by allowing that communication flows freely and that individuals understand their role and responsibility. Understanding of the conceptual framework about the world allows them to locate themselves within that world, and to make appropriate decisions in relation to it. Having knowledge that could be shared, implemented and used by others is important to capacity building in the organization. Once they share knowledge with other people, there might emerge different approaches that nourish and strengthen these organizational and individual's capacities.

INGOs and governments use organizational capacity building to guide their internal development and activities. On the other hand, community capacity building aims that people and communities strengthen the skills, competencies and abilities in order to face and solve social problems, such as exclusion and suffering. In this way, INGOs focus on understanding what hinder people to achieve their development goals while enhancing the abilities that will lead them to get the results desired. Besides, organizational capacity building includes the capacity to reassess, reexamine and change in terms of the needs and effectiveness.

8) Mission and strategy.

Vision and strategy lead organization's understanding of how to accomplish their mission. The four INGOs use their strategies to fulfill their vision and mission, which also support knowledge sharing.

The mission of the INGOs studied, supports technical knowledge sharing because they work based on their mission which inspire them to share, learn and improve their knowledge in order to do their job effectively to, in turn, fulfill their mission. Although, there are differences in their mission statements and also in their strategies because they focus on the main activities that each one of them develop.

Two new sub factors have emerged from the interviews related to the vision and mission of INGOs studied, which are: Fundraising and Specialization of the organization. The former refers to the importance of raising income using different strategies from diverse sources located in various geographical areas to accomplish their objectives as well as to strengthening knowledge sharing within the organization. The latter is the one of the three dimensions of organizational structure (the others are formalization and centralization/decentralization), which facilitates and empowers that teams and employees accomplish their duties as well as it distributes tasks and supports knowledge sharing within the organization (Dekoulou & Trivellas, 2017).

9) **Organizational climate and motivation.** All four INGOs have an organizational climate that support knowledge sharing. Although all of them have a people-oriented climate, there are some differences in the mixed organizational climate between them. Most of them have a mixture of the four types of organizational climate: people-oriented, rules-oriented and innovation-oriented.

All of these INGOs state that people's attitude is important for an effective knowledge sharing, such as treating them with respect, dignity, valuing their knowledge, and understanding their reality and context, being proactive and willing to debate, listening and creating knowledge, valuing their real contribution, willingness and openness to share technical knowledge and information, and providing their feedback. For example, INGO-4 states that "when conducting an internal workshop to share information about knowledge techniques, it may be that the communication is not adequate, the type and content of the message may not be attractive to participants or may cause their loss of interest. There must also be room for them to receive the information with openness and provide their

feedback." INGO-3 claims that "for the effective knowledge sharing, there must be a real contribution of people, the institution and the society… this is a key element to an effective international cooperation… We are an entity that facilitates processes that seek to be translated into results, not only to know other methodologies but also to be able to handle processes by sharing the knowledge that is developed in other countries."

People that intend to develop knowledge sharing, should emphasize on strengthening leadership skills and encourage the development of an organizational climate which facilitates knowledge sharing. Thus, the development efforts should be focused on the transfer of tacit and explicit knowledge while organizational performance improvement should emphasize the knowledge sharing processes (Suveatwatanakul, 2013).

Capacity building in INGOs

INGOs and governments use organizational capacity building to guide their internal development and activities. On the other hand, community capacity building aims that people and communities strengthen the skills, competencies and abilities in order to face and solve social problems, such as exclusion and suffering. In this way, INGOs focus on understanding what hinder people to achieve their development goals while enhancing the abilities that will lead them to get the results desired. Besides, organizational capacity building includes the capacity to reassess, reexamine and change in terms of the needs and effectiveness.

Other ways that use INGOs for technical knowledge sharing to building capacity are: First, they promote that individuals propose the courses or trainings that they need or want to learn. Then, they review and analyze the proposals based on if they are aligned with the organizational policy and approve it or not. For example, English,

climate change, etc. These trainings are stimulated by the organization in order to help their workers to developed greater skills which allows to grow and supports greatly the organizational development. Second, teamwork also helps to have the same vision and share technical knowledge which builds capacity in the organization to work together towards the same goal.

Today it is widely accepted the importance of organizational capacity building to increase its effectiveness. INGOs are engaged in developing their organizational capacity as well as in partnership working and strengthening civil society. Organizational Assessment (OA) is usually a self-evaluation of an organization's capacities which constitute a capacity development strategy. It is necessary that the organization learn from its own experience in order to facilitate the organizational self-assessment as well as to put into practice the results of the OA. In this way, developing INGO's requires the competences for organizational learning (Britton, 2005).

Learning organizations

The core of knowledge management is learning through sharing. Hong & Kuo (1999) suggest that learning through sharing allows that an organization may develop important characteristics of a learning organization. For example, INGOs' workers learn from the experiences shared by others, which add value to the organization and this process allows to developing a learning organization due to implicit knowledge becomes more explicit.

The learning organization depends on the following five factors: Systems thinking, personal mastery, mental models, building shared vision, and team learning.

The heart of the learning organization is the knowledge that people have learned and have shared with others. In order to build the organizational learning, it is necessary to transform implicit into explicit knowledge by sharing knowledge with others.

Knowledge sharing in INGOS

The gap between tacit and explicit knowledge might be reduced by developing the knowledge sharing process within the organization.

INGOs' individuals can learn through knowledge acquisition, sharing and utilization. However, an organization can only benefit if the knowledge is shared or transferred internally and externally. In this case, the organization becomes a learning organization when has the capability to learn as well as to create a sustainable competitive advantage.

According to INGOs, the difference between information and knowledge is that information is processed data but knowledge is integral and encompasses this information. Then, information is contrasted within a context and makes an analysis to integrate all the data related to a topic. Another difference is that information refers to facts, data and figures that are represented and can be analyzed to determine if it is useful, which will allow for employees to create knowledge. On the other side, knowledge is the understanding or experience that can be contrasted against the context or specific spaces of work. It is also the understanding of information or knowledge acquired by people throughout their education or experience. For example, information may be statistical data about the characteristics of the population, as well as the number of partners or how the organization is formed; while knowledge refers to how they work, how they do things, how the person or organization relates to the environment or other organizations about what is happening in the context.

Besides, the problem of organizational amnesia is very common to many INGOs. For this reason, managers hope that using KM can improve their information systems by eliminating fragmented, incomplete, inaccurate, and missing data. This raw information can be turned into the knowledge needed to find solutions to new problems

and challenges. From this study, INGOs use different kind of media to store and share knowledge and information with others. Besides, some INGOs studied use computer systems to manage the organizational information; the others need to systematize their technical processes in order to reduce their organizational amnesia. However, they have to filter and evaluate the information they share in order to get what is useful for them. Moreover, some barriers to knowledge sharing can be identified that difficult for the organization to improve its capacities through the benefits that provide when employees share their knowledge with each other. For example, when some information or knowledge is considered "confidential", in knowledge hoarding cases, or when individuals are afraid of losing their jobs if they share what they know with others.

Models studied

Single-loop and double-loop learning.

In the single-loop double-loop learning model, the single-loop learning tries to correct errors without questioning underlying assumptions while the double-loop learning detects errors, questions underlying assumptions behind the actions and behavior and also learn from these mistakes. The triple-loop learning allows the organization to learn about learning.

Argyris & Schön (1978) describes the double-loop learning in this way: "When the error detected and corrected permits the organization to carry on its present policies or achieve its present objectives, then that error-and-correction process is single-loop learning. Single-loop learning is like a thermostat that learns when it is too hot or too cold and turns the heat on or off. The thermostat can perform this task because it can receive information (the temperature of the room) and take corrective action. Double-loop learning occurs when error is detected and

corrected in ways that involve the modification of an organization's underlying norms, policies and objectives."

INGOs can get to know new ways of learning and new commitments by applying the Triple-loop learning which encompasses both Single- and Double-loop learning. In this way, these organizations can have many benefits, such as: They can understand how to link problems with solutions even when separated widely by time and place. It also facilitates to understand how previous actions could create the conditions that caused the current situation and problems.

INGOs studied think that they are doing the right things because they focus their activities to fulfill their mission. For this reason, these INGOs are applying the Double-loop learning stage of this model. In this way, they can develop their skills of honesty, candor, self-awareness and taking responsibility. They can also solve some problems by correcting or changing the underlying causes (i.e., assumptions, organizational norms, ways to work, policies, among others) and learn lessons from those mistakes and incorrect methods in order to remove the root causes to improve the behavior. In this stage, they may improve their decision-making which leads to organizational learning. One way to increase the explicit knowledge in INGOs is advancing to the Tripple-loop learning stage in order to learn about learning to become a learning organization, as well as analyze and decide what is right.

A Model for Non-profit Capacity Building.

This model serves as a guide in the development of intervention strategies. It uses five components vision and mission, leadership, resources, outreach, and products and services. INGOs studied use only one out of these five elements, which is mission and strategy, as it is common that organizations may use one factor more

than others. Although INGOs have different missions and strategies, they focus all their activities on fulfilling their missions which support their knowledge sharing. For these INGOs, the skills already exist, that is why they are only focusing on strengthening them. They also consider that there is already knowledge in the organization and they only need to focus on supporting to strengthen, contribute, impel and share this knowledge to build together knowledge and experiences that allow people grow by themselves. Society is built as a whole through coexistence. Their role is to be collective constructors of knowledge with social utility for knowledge and experiences sharing among all stakeholders. According to INGO-1, transferring means depositing something where there is something already. Building knowledge is more experiential. Sharing is synonymous with exchanging due to when individuals share their knowledge, they might expect to learn from others too. Information is everywhere, but it has to be communicated throughout a process of assimilation, debating and testing in order to create and share knowledge. The organization shares experiences and processed information that is communicated through events, documents, meetings forums, which generates knowledge. Information must be processed, assimilated and disseminated to the team. Knowledge passes from an information stage, which is contrasted, socialized and evaluated if it is useful for the organization, in which case it contributes to generate knowledge.

SECI model of knowledge generation.

This model can be applied to the four INGOs studied, which is useful to analyze the four stages of knowledge in these organizations: *a) Socialization.* They use different ways to socialize knowledge, such as: Microsoft Share Point, organize events for training and accountability, developing joint strategies, meetings to

create new knowledge through discussion, analysis, interactions, observation, and sharing information and experiences, as well as by interacting with outside stakeholders. *b) Externalization.* Some INGOs organize international events yearly with external trainers who share their knowledge and experiences with other members within the organization; they also promote building learning communities for connecting people, setting goals and measuring collective progress, enabling shared learning, and deepen collective knowledge. *c) Internalization.* They also provide training programs to their employees, who internalize the tacit knowledge and try to create new knowledge as a result of this process; another key factor for the construction and internalization of knowledge is people's attitude. *d) Combination.* They use technical, administrative and financial computer systems to manage information and create reports for decision making, and others publish periodically in magazines and the organizational website, their outcomes of project's implementations and other important news and information in order to share the activities performed by these organizations with the rest of the world.

INGOs are increasingly more interested in the ways knowledge management (KM) can help them to organize their information to improve their collective memory. The problem of organizational amnesia is very common to many NGOs. For this reason, managers and directors hope that using KM can improve their information systems by eliminating fragmented, incomplete, inaccurate, and missing data. In this way, this raw information can be turn into the knowledge needed to find solutions to new problems and challenges.

The significance or importance of this research for INGOs consists of they can improve their understanding about they might manage the factors investigated that

influence knowledge sharing. In this way, they can share knowledge with others more effectively to build a better learning organization.

Implications for INGOs

INGOs are working to fulfill the Millennium Goals which are harder to reach. These organizations are in a continuous adaptation to meet the millennium goals, which is not easy, because they have to do adjustments to be efficient and relevant in the world of development. They make a constant and effective contribution to reduce the common disparities in the globalized world. They promote economic and environmental development. Technical knowledge sharing is not ethereal and has to be based on some principles which supports the generation of employment and income. Technical knowledge sharing supports to fulfill their mission, which is the other way around of the question posted, according to one INGO participant in this research. For another INGO, their mission is the base for the major part of their technical knowledge sharing. Respondents also suggested that fundraising and the specialization (sub factors) allows for the organization to achieve its goals and support knowledge sharing.

Organizational knowledge sharing is the main axis of organizational learning due to the organization might have many benefits (Hsu, 2008). However, some people can perceive that tacit knowledge takes time and resources to be shared, as well as there is an opportunity cost due for giving up to perform other activities to engage in knowledge sharing. Then, it is advisable to reduce the opportunity cost in order to increase knowledge sharing as much as possible.

It is recommendable for INGOs to develop capacity building through strengthening existing structures, encouraging participative leadership, promoting knowledge as innovation capacity, introducing incentives for compliance and publishing a guideline for stakeholder engagement which includes their responsibilities, roles, mandates, etc.,

in order to support knowledge sharing. Other ways to improve capacity building in INGOs, based on the findings of this research, consist of eliminating or decreasing the causes of the problem identified in this study, which are: a) Training the staff in administrative topics as well as in the use of administrative tools and sharing their knowledge with others within the organization in order to increase their performance not only of the management but also of the staff. b) Obtaining tacit knowledge from employees in order to turn it into explicit knowledge with value for the organization to be used later by motivating the staff to share their knowledge and experiences more often through meetings, training, social media, email, computer systems, among others. c) Decreasing hoarding technical knowledge by providing financial incentives to employees; asking to mentoring a successor before a promotion or leave the organization; compensating them based on a good team´s performance; defining strategies to promote the interaction inside the organizational culture in order to force knowledge sharing as well as spreading that hoarding involves built-in penalties; and reducing people's dissatisfaction with the company by giving them a positive feedback and valuing their work and contribution to the organization. According with the INGOs investigated, people that feel that their work is valued, are more willing to share knowledge with others; they also are more open-minded to do this when the organizational culture supports knowledge sharing. d) Overcoming weaknesses of internal communication, which can be produced due to the lack of time or resources that constrain knowledge sharing.

Future research

Future research addressed for researchers includes the following research questions suggested based on the findings of this study:

Proposed question for future research 1:

What factors constrain knowledge sharing in NGOs in Ecuador?

This research has identified some general causes that constrain knowledge sharing in INGOs, such as knowledge hoarding, a deficient internal communication, lack of time or resources, considering "confidential" to some information, personal ego, insufficient financial incentives, discontent with the organization, or staff may be seeking to maintain or build power and control, among others. Nevertheless, it would be interesting to study the specific factors that may limit knowledge sharing in local NGOs.

Proposed question for future research 2:

What factors influence knowledge sharing in INGOs as means for capacity building in Colombia and Peru?

Similarly, it is desirable to conduct a cross-cultural study in the future on INGOs located in other Latin American countries (for example, Colombia and Peru), as this study was limited to one country (Ecuador), in order to carry out a comparative analysis effect of knowledge sharing factors on learning organizations because this research obtained new factors that may affect knowledge sharing in the Ecuadorian context which may be different in other contexts.

Proposed question for future research 3:

What is the impact of knowledge sharing on the relationship between organizational culture and performance in INGOs in Ecuador?

Finally, it is suggested to conduct additional research to measure the impact of knowledge sharing on organizational culture and performance in INGOs in order to strengthen organizational culture and successful deployment of knowledge

management in these organizations. Besides, there is a gap in the literature about this topic.

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APPENDICES

Appendix A. Capacities according to levels

	Capacity creation	Capacity utilization	Capacity retention
Individual level	Development of adequate skills, knowledge, competencies and attitudes	Application of skills, knowledge, competencies on the workplace	Reduction of staff turnover, facilitation of skills and knowledge transfer within institutions
Organizational level	Establishment of efficient structures, processes and procedures	Integration of structures, processes and procedures in the daily workflows	Regular adaptation of structures, processes and procedures
Institutional and policy environment level	Establishment of adequate institutions, laws and regulations	Enforcement of laws and regulations for good governance	Regular adaptation of institutions, laws and regulations

Note. Public Sector Capacity Building Secretariat, Rwanda, 2012

Appendix B. Types: examples of hard and soft capacities

Hard

Capacities that are generally considered to be technical, functional, tangible and visible

- Technical skills, explicit knowledge and methodologies (which for individuals can be considered as competencies)
- Organizational capacity to function: appropriate structures, systems and procedures for management, planning, finance, human resources, monitoring and evaluation, and project cycle management, the ability to mobilize resources
- Laws, policies, systems and strategies (enabling conditions)

Note: tangible resources like infrastructure, money, buildings, equipment and documentation can be considered as the material expression or product of capacity, but they are not capacity in and of themselves.

Soft

Capacities that are generally considered to be social, relational, intangible and invisible

Operational capacities such as:

- Organizational culture and values
- Leadership, political relationships and functioning
- Implicit knowledge and experience
- Relational skills: negotiation, teamwork, conflict resolution, facilitation, etc.
- Problem solving skills
- Intercultural communication

Adaptive capacities such as:

- Ability and willingness to self-reflect and learn from experience
- Ability to analyze and adapt
- Change readiness and change management
- Confidence, empowerment and or participation for legitimacy to act

Note. LenCD.org, 2013

Appendix C. Tacit Knowledge and Explicit Knowledge
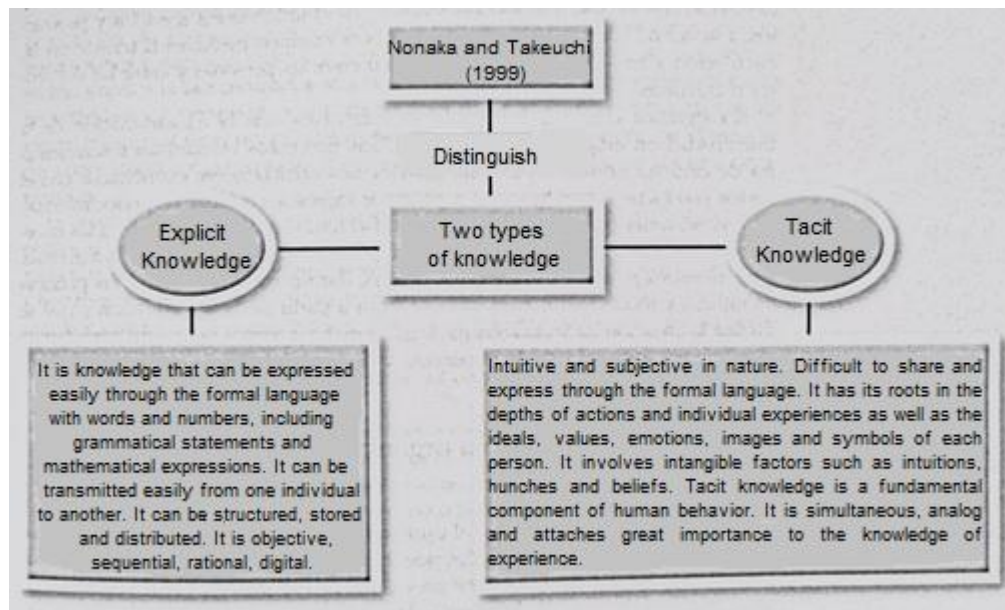
Source: Knowledge Management and Knowledge Based Development

Note. Retrieved from "*La organización creadora de conocimiento",* Nonaka, I., & Takeuchi, H., 1999. Mexico,D.F.: Oxford University Press.

Appendix D. Process of knowledge
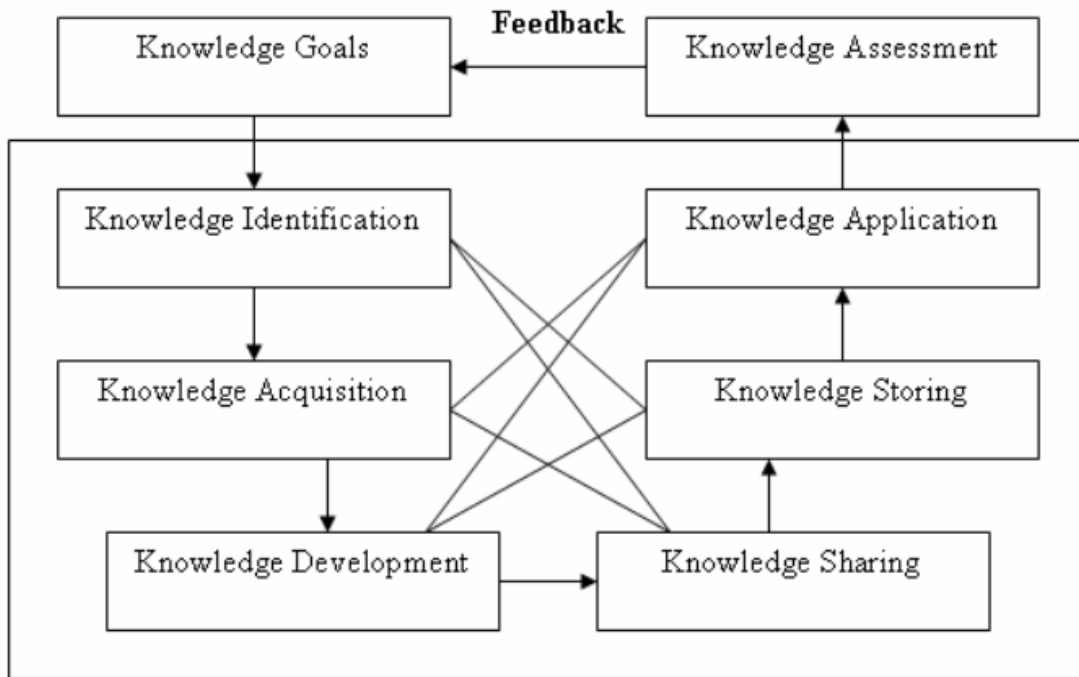
Note. Retrieved from "Process of knowledge", Probst – Raub, 1998.

Appendix E. Links between organizational learning and knowledge

management

Organisational Learning:	**Knowledge Management:**
▪ is the intentional use of collective and individual learning processes to continuously transform organisational behaviour in a direction that is increasingly satisfying to its stakeholders. ▪ provides a purpose for the use of knowledge. ▪ is always context-specific. The purpose of learning is to solve problems or address challenges and knowledge is selected because of its utility in the specific circumstances. ▪ is usually demand led.	▪ is the systematic processes by which the knowledge required by an organisation is acquired, distilled, shared, stored, retrieved and used. ▪ is a means to enable organisational learning. ▪ can be context-independent. For example, good practices can be developed and disseminated without awareness of the circumstances in which it may be used. ▪ is usually supply driven.

Note. Retrieved from "Links between organizational learning and knowledge management", Britton, B., 2005.

Appendix F. The structural model for perceived effectiveness of shared knowledge
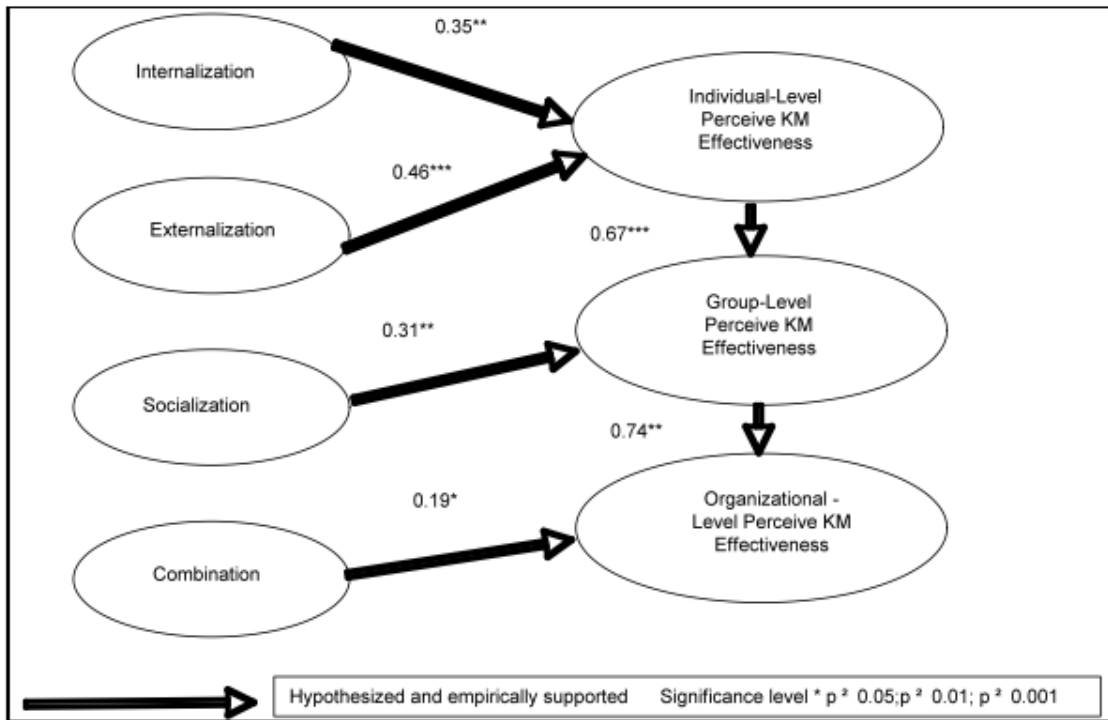
Note. Retrieved from "The structural model for perceived effectiveness of shared knowledge", Becerra-Fernandez et al.

Appendix G. A framework for addressing nonprofit capacity building
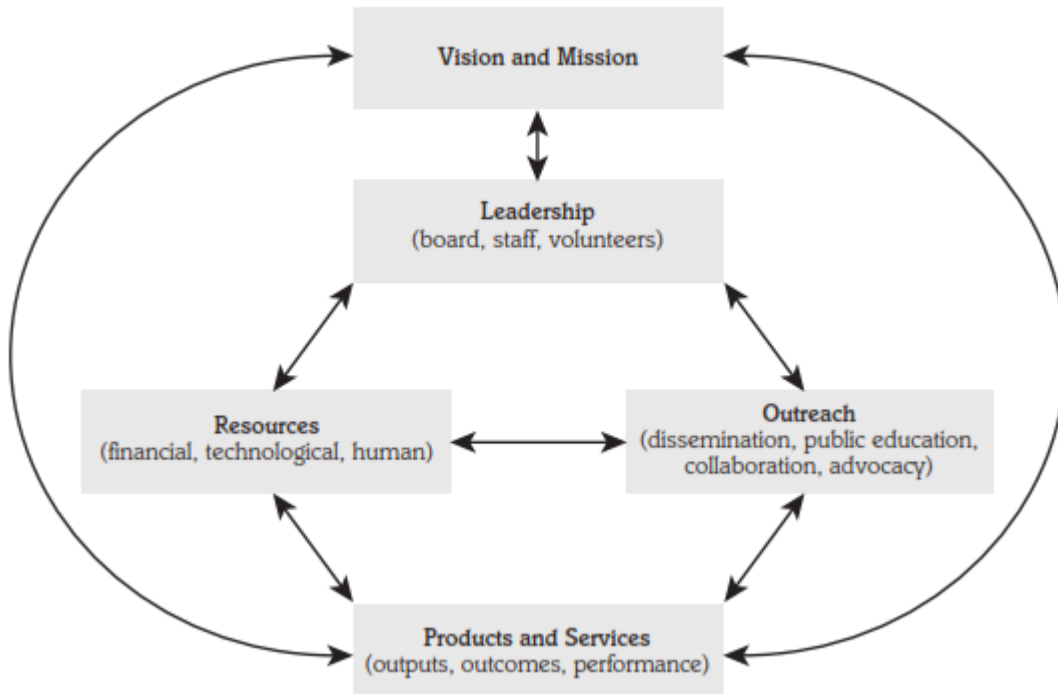
Note. Retrieved from "*Building Nonprofit Capacity A Framework for Addressing the Problem*", De
Vita, et al., 2000. De Vita, C., & Fleming, C. (2001). Washington, DC: The Urban Institute.

Appendix H. Single-loop and double-loop learning
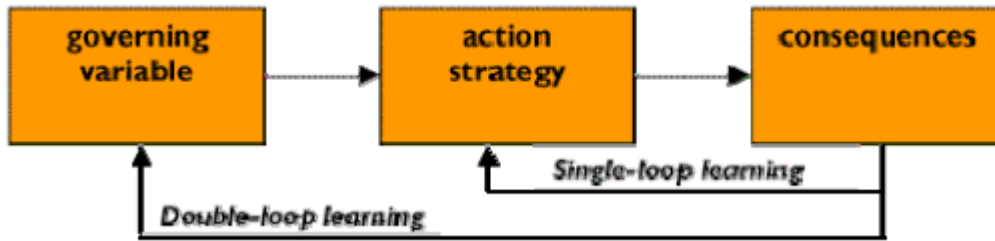
Note. Retrieved from "*Organizational Learning: A Theory of Action Perspective*.", Argyris, C., & Schon, D. (1978). Addison Wesley Longman Publishing Co.

Appendix I. Objectives of the Development National Plan

# Objective	Objective
1	Foster equality, cohesion and social and territorial integration
2	Improve the capabilities and potential of citizenship
3	Increase life expectancy and population's quality of life
4	Promote a healthy and sustainable environment, and ensure access to safe water, air and soil
5	Guarantee national sovereignty, peace and foster Latin American integration
6	Ensure a stable, just and decent work
7	Recover and expand public spaces and common meeting
8	Affirm national identity and strengthen diverse and intercultural identities
9	Promote access to justice
10	Ensure access to public and political participation
11	Establish a supportive and sustainable economic system
12	Reform the State for the collective welfare

Note. Plan Nacional de Desarrollo 2007-2010.

Appendix J. Selection of INGOs by NDP objective orientation located in Quito, Ecuador

# seq	Sectors of intervention	Headquarters	Objective DNP
1	ADMINISTRATIVE, AGRICULTURE, ENVIRONMENT, PRODUCTIVE AID, SCIENCE AND TECHNOLOGY, CULTURE, SOCIAL DEVELOPMENT, EDUCATION, GENDER, HEALTH	Quito	
2	ADMINISTRATIVE, ENVIRONMENT, PRODUCTIVE AID, SOCIAL DEVELOPMENT, EDUCATION, FINANCES, RISK MANAGEMENT, MULTI-SECTOR, HEALTH	Quito	
3	ADMINISTRATIVE, RISK MANAGEMENT, ENVIRONMENT, PRODUCTIVE AID	Quito	
4	AGRICULTURE, PRODUCTIVE AID, TRADE COOPERATION, SOCIAL DEVELOPMENT	Quito	
5	AGRICULTURE, PRODUCTIVE AID, SOCIAL DEVELOPMENT, TOURISM	Quito	
6	AGRICULTURE, SOCIAL DEVELOPMENT, MULTI-SECTOR	Quito	
7	ENVIRONMENT	Quito	
8	**ENVIRONMENT**	**Quito**	**1,2,3**
9	ENVIRONMENT	Quito	
10	ENVIRONMENT	Quito	
11	ENVIRONMENT	Quito	
12	ENVIRONMENT	Lago Agrio	
13	**ENVIRONMENT**	**Quito**	**4**
14	ENVIRONMENT	Quito	
15	**ENVIRONMENT**	**Quito**	**4**
16	ENVIRONMENT, PRODUCTIVE AID, FOREIGN TRADE, INDUSTRIALIZATION, FISHERIES AND COMPETITIVENESS, COMMUNICATIONS, SOCIAL DEVELOPMENT, EDUCATION, GENDER, RISK MANAGEMENT, REFUGEES, HEALTH, FOOD SECURITY, TOURISM	Quito	
17	ENVIRONMENT, PRODUCTIVE AID, SOCIAL DEVELOPMENT, MULTI-SECTOR, TOURISM	Cuenca	
18	ENVIRONMENT, PRODUCTIVE AID, REFUGEES, TOURISM	Francisco de Orellana	
19	**ENVIRONMENT, COMMUNICATIONS, JUSTICE AND SECURITY**	**Quito**	**4**
20	ENVIRONMENT, RURAL DEVELOPMENT, SOCIAL DEVELOPMENT, EDUCATION	Quito	
21	ENVIRONMENT, RURAL DEVELOPMENT, DESARROLLO SUSTENTABLE	Quito	
22	**ENVIRONMENT, SOCIAL DEVELOPMENT, PRODUCTIVE AID, ENVIRONMENTAL SANITATION, AGRICULTURE**	**Quito**	**1,2,3**
23	**ENVIRONMENT, SOCIAL DEVELOPMENT, TOURISM, AGRICULTURE, ENVIRONMENTAL SANITATION, PRODUCTIVE AID**	**Cotacachi**	**1,4**
24	ENVIRONMENT, URBAN DEVELOPMENT AND HOUSING, PRODUCTIVE AID, ENVIRONMENTAL SANITATION	Quito	
25	ENVIRONMENT, EDUCATION, HEALTH, SOCIAL DEVELOPMENT, PRODUCTIVE AID	Esmeraldas	
26	ENVIRONMENT, TOURISM, ORGANIZATION AND TERRITORY, NATURAL RESOURCES AND ENERGY	Cotacachi	

# seq	Sectors of intervention	Headquarters	Objective DNP
27	**ENVIRONMENT, HEALTH, EDUCATION, ADMINISTRATIVE, SOCIAL DEVELOPMENT, URBAN DEVELOPMENT AND HOUSING, SOCIAL DEVELOPMENT, PRODUCTIVE AID, CULTURE, TOURISM, ADMINISTRATIVE**	**Quito**	**1,2**
28	PRODUCTIVE AID	Otavalo	
29	PRODUCTIVE AID	Ambato	
30	PRODUCTIVE AID. EDUCATION AND TRAINING OF FARMERS	Cuenca	
31	PRODUCTIVE AID, AGRICULTURE	Quito	
32	PRODUCTIVE AID, AGRICULTURE, ENVIRONMENT, HEALTH, SOCIAL DEVELOPMENT	Quito	
33	PRODUCTIVE AID, AGRICULTURE, ENVIRONMENTAL SANITATION, FINANCES	Quito	
34	PRODUCTIVE AID, FOOD SECURITY, ENVIRONMENT, RISK MANAGEMENT, URBAN DEVELOPMENT AND HOUSING	Quito	
35	PRODUCTIVE AID, TOURISM, SOCIAL DEVELOPMENT, ADMINISTRATIVE, ENVIRONMENT PROTECTION AND NATURAL DISASTERS, ENVIRONMENT, HEALTH	Quito	
36	PRODUCTIVE AID, TOURISM, RISK MANAGEMENT, ENVIRONMENT, AGRICULTURE	Quito	
37	FOREIGN AFFAIRS, CULTURE, SOCIAL DEVELOPMENT, GENDER, JUSTICE AND SECURITY, REFUGEES	Quito	
38	SCIENCE AND TECHNOLOGY ENVIRONMENT AND ECOLOGY	Quito	
39	PRODUCTIVE DEVELOPMENT	Quito	
40	PRODUCTIVE DEVELOPMENT	Guayaquil	
41	RURAL DEVELOPMENT, SOCIAL DEVELOPMENT	SI	
42	RURAL DEVELOPMENT, HEALTH	Quito	
43	RURAL DEVELOPMENT, HEALTH	Quito	
44	**SOCIAL DEVELOPMENT**	**Quito**	**1,4**
45	SOCIAL DEVELOPMENT	Quito	
46	SOCIAL DEVELOPMENT	Quito	
47	SOCIAL DEVELOPMENT	Guayaquil	
48	SOCIAL DEVELOPMENT	Quito	
49	SOCIAL DEVELOPMENT	Quito	
50	SOCIAL DEVELOPMENT	Quito	
51	SOCIAL DEVELOPMENT	Galápagos	
52	SOCIAL DEVELOPMENT	Quito	
53	**SOCIAL DEVELOPMENT, PRODUCTIVE AID**	**Quito**	**2,3**
54	SOCIAL DEVELOPMENT	Quito	
55	SOCIAL DEVELOPMENT, AGRICULTURE DEVELOPMENT	Galápagos	
56	**SOCIAL DEVELOPMENT, AGRICULTURE, PRODUCTIVE AID, JUSTICE AND SECURITY, NATURAL RESOURCES AND ENERGY, ENVIRONMENT**	**Puerto Ayora**	**4**
57	SOCIAL DEVELOPMENT, ENVIRONMENT	Quito	
58	SOCIAL DEVELOPMENT, ENVIRONMENT, ADMINISTRATIVE	Azuay	
59	SOCIAL DEVELOPMENT, ENVIRONMENT, RISK MANAGEMENT, CULTURE, REFUGEES	Macas	

# seq	Sectors of intervention	Headquarters	Objective DNP
60	SOCIAL DEVELOPMENT, ENVIRONMENT, ORGANIZATION AND TERRITORY, PRODUCTIVE AID, EDUCATION, HEALTH, COMMUNICATIONS, TOURISM	Riobamba	
61	**SOCIAL DEVELOPMENT, CULTURE, EDUCATION**	**Riobamba**	**1**
62	SOCIAL DEVELOPMENT, RURAL DEVELOPMENT, EDUCATION	Riobamba	
63	**SOCIAL DEVELOPMENT, RURAL DEVELOPMENT, ENVIRONMENT, AGRICULTURE**	**Quito**	**3**
64	SOCIAL DEVELOPMENT, EDUCATION	Guaranda	
65	SOCIAL DEVELOPMENT, MIGRATION	Puerto Ayora	
66	SOCIAL DEVELOPMENT, HEALTH	Quito	
67	SOCIAL DEVELOPMENT, HEALTH	Quito	
68	SOCIAL DEVELOPMENT, HEALTH	Pimampiro	
69	SOCIAL DEVELOPMENT, FOOD SECURITY, HEALTH, PRODUCTIVE AID, RISK MANAGEMENT	Quito	
70	SOCIAL DEVELOPMENT, INTERNAL AND EXTERNAL SECURITY, ADMINISTRATIVE, HEALTH, INTERNAL AFFAIRS, JUSTICE AND SECURITY	Quito	
71	**URBAN DEVELOPMENT AND HOUSING, ORGANIZATION AND TERRITORY, EDUCATION, SOCIAL DEVELOPMENT**	**Loja**	**4**
72	**EDUCATION, HEALTH CARE, BASIC NEEDS CARE OF LOW INCOME COLLECTIVE, BASIC NEEDS ATTENTION TO HANDICAPPED.**	**Quito**	**2**
73	EDUCATION	Quito	
74	EDUCATION	Quito	
75	EDUCATION	Galápagos	
76	**EDUCATION**	**Quito**	**1,2,3**
77	EDUCATION	Quito	
78	EDUCATION	Quito	
79	EDUCATION	Quito	
80	EDUCATION	Quito	
81	**EDUCATION**	**Quito**	**2**
82	**EDUCATION, SOCIAL DEVELOPMENT**	**Quito**	**1,2,3**
83	EDUCATION, SOCIAL DEVELOPMENT	Galápagos	
84	EDUCATION, SOCIAL DEVELOPMENT, INTERCULTURAL RELATIONS	Quito	
85	**ECUADORIAN HUMAN TALENT STRENGTHENING**	**Quito**	**4**
86	GENDER, PRODUCTIVE AID, SOCIAL DEVELOPMENT	Quito	
87	GENDER, SOCIAL DEVELOPMENT	Quito	
88	GENDER, REPRODUCTIVE HEALTH	Quito	
89	RISK MANAGEMENT, ENVIRONMENT, PRODUCTIVE AID, SOCIAL DEVELOPMENT, HUMANITARIAN AID, EDUCATION, REFUGEES, HEALTH, FOREIGN AFFAIRS, JUSTICE AND SECURITY	Quito	
90	GOVERNANCE, DECENTRALIZATION	Quito	
91	LABOR INTEGRATION, INSTITUTIONAL DEVELOPMENT, SOCIAL AND SPECIFIC PERFORMANCE, SOCIAL SENSIBILIZATION	Quito	
92	RESEARCH	Quito	
93	MULTI-SECTOR, PRODUCTIVE AID	Quito	

# seq	Sectors of intervention	Headquarters	Objective DNP
94	CHILDREN AND TEENAGERS, FAMILY VIOLENCE, RIGHTS	Quito	
95	NUTRITION AND HEALTH, WATER AND SANITATION, ORGANIC AGRICULTURE, EDUCATION, SOCIAL DEVELOPMENT	Quito	
96	REFUGEES	Quito	
97	REFUGEES	Guayaquil	
98	REFUGEES, EDUCATION	Guayaquil	
99	HEALTH	Guayaquil	
100	HEALTH	Quito	
101	HEALTH	Mindo	
102	HEALTH	Quito	
103	HEALTH	Quito	
104	HEALTH	Riobamba	
105	**HEALTH**	**Quito**	**1**
106	**HEALTH**	**Quito**	**4**
107	**HEALTH, SOCIAL DEVELOPMENT**	**Quito**	**2,3**
108	HEALTH, SOCIAL DEVELOPMENT		
109	HEALTH, SOCIAL DEVELOPMENT, ADMINISTRATIVE	Quito	
110	HEALTH, SOCIAL DEVELOPMENT, EDUCATION	Quito	
111	HEALTH, EDUCATION, INTERNAL AFFAIRS, SOCIAL DEVELOPMENT	Quito	
112	HEALTH, EDUCATION, SOCIAL DEVELOPMENT	Quito	
113	HEALTH, EDUCATION, SOCIAL DEVELOPMENT, PRODUCTIVE AID, URBAN DEVELOPMENT AND HOUSING	Quito	
114	FOOD SECURITY, SOCIAL DEVELOPMENT, HEALTH, EDUCATION	Otavalo	
115	MICROFINANCES SERVICES, HEALTH, EDUCATION AND TRAINING	Quito	
116		Quito	
117		Quito	
118		Quito	

Note. Secretaría Técnica de Cooperación Internacional – SETECI, 2015.

Appendix K. Interview questions

The purpose of this research is to study the factors that influence technical knowledge sharing internally in your organization. We very much appreciate your collaboration to answer the following questions:

1. Which are the main activities that your organization does?

2. What is your position in the organization?

3. What is your country of origin?

4. Can you, please, give your own definition of technical knowledge sharing? (For example, it is related to the main activities of your organization).

5. What are the factors that facilitate sharing technical knowledge effectively in your organization? Please, explain and give some examples.

6. How is technical knowledge sharing building capacity in your organization?

7. Can you, please, describe the predominant culture in your organization? (For example, like a family, dynamic and entrepreneurial, results oriented, or structured and controlled).

8. How does this organizational culture facilitate yours and others' technical knowledge sharing? (For example, organizational culture includes shared assumptions, values, and beliefs that govern how people behave in the organization).

9. How do you share technical knowledge in your role?

10. How does your role impact the way that you share technical knowledge?

11. Do you have access to the information that you need in order to do your job effectively? Please, describe.

12. Is the information available to others? Please, describe.

13. Is the organizational climate conductive to sharing technical knowledge? (For example, organizational climate refers to how people experience the culture of the organization; the culture is the personality and the climate is the mood of the organization. Types of climate include people oriented, rules oriented, innovation oriented or goal oriented). Please, explain your answer and give an example.

14. Does your organization have procedures for sharing technical knowledge? Please, describe.

15. What type of information is expected to be shared? (For example, projects, procedures, reports, memorandums, others). Please, describe.

16. To what extent do your core organizational practices support knowledge sharing? (For example, business strategy, technology, decision making, etc.). Please, describe.

17. Does technical knowledge sharing improve managerial practices in your organization? Please, describe and give an example.

18. Is technical knowledge sharing valued in your organization? Please, explain and give an example.

19. Are the technical knowledge resources that your organization provides valuable to you? If yes, please, explain and give some examples.

20. If not, how can technical knowledge resources be improved to be valuable to you?

21. Do you think the technical knowledge you share is valued by others in the organization? Please, explain and give an example.

22. What type of media supports technical knowledge sharing within the organization? (For example, email, social media, web, phone, face-to-face, computing systems, others). Please, explain and give an example.

23. How does the current organizational structure support technical knowledge sharing within the organization? (For example, an organizational structure can have a centralized structure, or a product/geographical organization).

24. How is the mission of your organization facilitating sharing technical knowledge internally? (For example, the organizational mission statement should clearly communicate what your organization does).

25. How is the strategy of your organization facilitating sharing technical knowledge internally? (For example, the organizational strategy includes the actions to ensure that long-term goals are achieved).

26. Email address:

27. Telephone number:

Thank you for your participation!

Appendix L. Relation between factors, research sub questions and interview questions

Factors	Research sub questions	Interview questions
Organizational culture	How is technical knowledge sharing affected by the organizational culture?	1) Can you, please, give your definition of technical knowledge sharing? (For example, related to the main activities of your organization). 2) Can you, please, describe the predominant organizational culture in your organization? (For example, like a family, dynamic and entrepreneurial, results oriented, or structured and controlled). 3) How does this organizational culture facilitate yours and others' technical knowledge sharing? (For example, organizational culture includes shared assumptions, values, and beliefs that governs how people behave in the organization).
Role in organization	How does staff's role within the organization facilitate knowledge sharing?	4) How do you share technical knowledge in your role? 5) How does your role impact the way that you share technical knowledge? 6) Do you have access to the information that you need in order to do your job effectively? Please, describe. 7) Is the information available to others? Please, describe.
Procedures for managing knowledge	What type of procedures are in place to facilitate technical knowledge sharing within the organization?	8) Does your organization have procedures for sharing technical knowledge? Please, describe. 9) What type of information is expected to be shared? (For example, projects, procedures, memos, reports, others). Please, describe.
Perceived value of knowledge sharing	Do employees value sharing knowledge within the organization?	10) Is technical knowledge sharing valued in your organization? Please, explain and give an example. 11) Are the technical knowledge resources that your organization provides valuable to you? If yes, please, explain and give some examples. 12) If not, how can the technical knowledge resources be improved to be valuable to you? 13) Do you think the technical knowledge you share is valued by others in the organization? Please, explain and give an example.
Media used for sharing information	What type of media support the individuals' sharing technical knowledge within the organization?	14) What type of media support technical knowledge sharing within the organization? (For example, email, social media, web, phone, face-to-face, computing systems, others). Please, explain and give an example.
Management practices	What kind of management practices support individuals' sharing technical knowledge within the organization?	15) To what extent do your core organizational practices support knowledge sharing? (For example, business strategy, technology, decision making, etc.). Please, describe. 16) Does technical knowledge sharing improve managerial practices in your organization? Please, explain and give an example. 17) What are the factors that facilitate sharing technical knowledge effectively in your organization? Please, explain and give some examples.

Factors	Research sub questions	Interview questions
Organizational structure	How does the structure of the organization support the knowledge sharing within the organization?	18) How does the current organizational structure support technical knowledge sharing within the organization? (For example, an organizational structure can have a centralized structure, or a product/geographical organization). 19) Is technical knowledge sharing building capacity in your organization? Please, explain and give an example.
Mission and strategy	How does the mission of the organization facilitate sharing technical knowledge internally?	20) How is the mission of your organization facilitating to share technical knowledge internally? (For example, the organizational mission statement should clearly communicate what your organization does).
	How does the strategy facilitate to share knowledge internally?	21) How is the strategy of your organization facilitating to share technical knowledge internally? (For example, the organizational strategy includes the actions to ensure that long-term goals are achieved).
Organizational climate and motivation	How does organizational climate support knowledge sharing?	22) Is the organizational climate conductive to share technical knowledge? (For example, organizational climate refers to how people experience the culture of the organization; the culture is the personality and the climate is the mood of the organization; types of climate include: people oriented, rules oriented, innovation oriented or goal oriented). Please, explain your answer and give an example.

Source. Author

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Appendix M. Data triangulation matrix format

Factors	Sub factors	Subject positions				Convergences	Divergences
		INGO-1	INGO-2	INGO-3	INGO-4		
Organizational culture							
Role in organization							
Procedures for managing knowledge							
Perceived value of knowledge sharing							
Media used for sharing information							
Management practices							
Organizational structure							
Mission and strategy							
Organizational climate and motivation							

Source. Author

Appendix N. Factors and sub factors of technical knowledge sharing
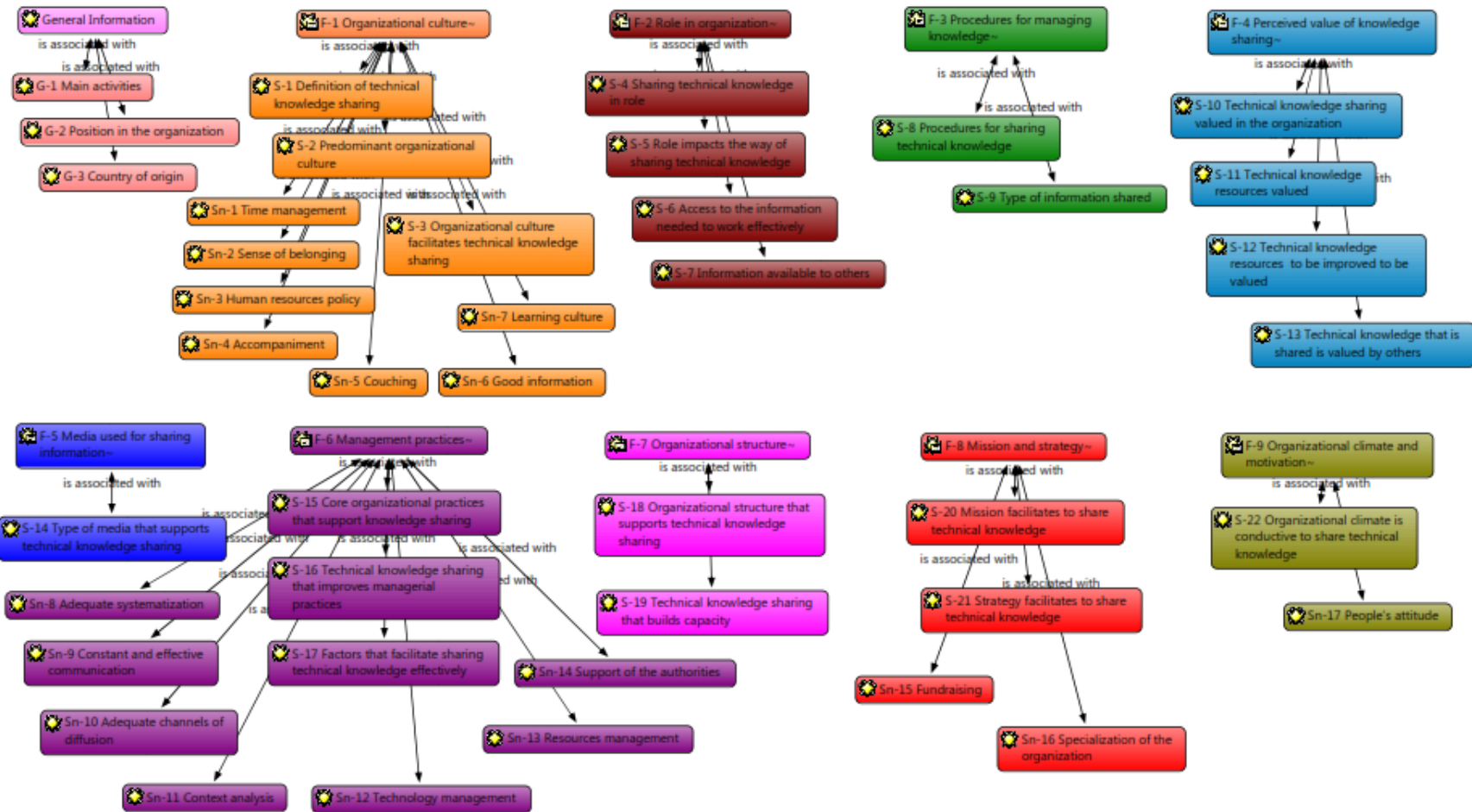
Source: Atlas.ti
Prepared by: Author

Appendix O. General information about the four INGOs

General information	INGO-1	INGO-2	INGO-3	INGO-4
Main activities	It focuses on technical and financial support to local Ecuadorian foundations that promote the fight against social identities. This NGO is working with the approach of human rights especially of children. It is also working on two strategic objectives: Combating poverty and violence	It works in four areas: 1) Economic promotion with equity, business straining, financial services, and natural resources. 2) They work in training with young people. 3) With local financial institutions, in access to financial education, micro-leasing, financing mechanisms, factoring. 4) Air quality throughout mobile sources, reduction of solid and green-house waste, biogas, water quality, development of state standards for certain sectors subjects and sectors.	It is an organization that works on water conservation on which life depends. There are three strategies related to water, oceans and cities. In Ecuador, INGO-3 works on land and water. In Latin America, the organization works on land, water, seas and infrastructure. At the global level, the issue of infra-structure is included in land.	The main activities are: 1) The professionalization of producer organizations for effective marketing with organizations in coffee and cocoa activities. 2) The accompaniment in the development of public and private policies to improve the supply in such a way that the chains of food supply are more sustainable.
Position of participants	- National Director. - Administrative Coordinator (Sponsorship Coordinator previously).	- Representative Director for Ecuador and Deputy Director for South America.	- Representative Director for Ecuador. - Coordinator of the Land Strategy for Ecuador. - Water Safety Manager	- Regional Director. - Coordinator of the program in Ecuador and international consultant. - Responsible for Planning, Learning and Accountability for the regional office (Ecuador and Peru).
Country of origin (birth) of participants	Ecuador (Riobamba, Quito)	Switzerland (Müstair)	Ecuador (Quito)	Netherlands, Ecuador (Quito)
Headquarters' country	Germany	Switzerland	United States	Belgium

Source. Author

Appendix P. Codification of factors and sub factors in Atlas.ti

Factors	Codes	Sub factors	Sub codes
			Sn-1
			Sn-2
		1) Time management	Sn-3
		2) Sense of belonging	
		3) Human resources policy	Sn-4
1) Organizational culture		4) Accompaniment	
		5) Coaching	Sn-5
		6) Good information	
	F-1	7) Learning culture	Sn-6
			Sn-7
2) Role in organization	F-2		
3) Procedures for managing knowledge	F-3		
4) Perceived value of knowledge sharing	F-4		
5) Media used for sharing information	F-5		
			Sn-8
			Sn-9
		8) Adequate systematization	
		9) Constant and effective communication	Sn-10
6) Management practices		10) Adequate channels of diffusion	
		11) Context analysis	Sn-11
		12) Technology management	
	F-6	13) Resources management	Sn-12
		14) Support of the authorities	
			Sn-13
			Sn-14
7) Organizational structure	F-7		
		15) Fundraising	Sn-15
8) Mission and strategy	F-8	16) Specialization of the organization	Sn-16
9) Organizational climate and motivation	F-9	17) People's attitude	Sn-17

Source: author

Appendix Q. Initial Atlas.ti Code Book

Subject Position Codes:

SP1-INGO-1

SP2-INGO-2

SP3-INGO-3

SP4-INGO-4

SP5-Investigator

Management Codes: Families:

General Information

Factors of Knowledge Sharing

Analytical Codes:

A) General Information: Codes:

1) G-1 Main activities

2) G-2 Position in the organization

3) G-3 Country of origin

B) Factors of Knowledge Sharing: Codes:

1) F-1 Organizational culture: Sub codes:

- S-1 Definition of technical knowledge sharing

- S-2 Predominant organizational culture

- S-3 Organizational culture facilitates technical knowledge sharing

2) F-2 Role in organization: Sub codes:

- S-4 Sharing technical knowledge in role

- S-5 Role impacts the way of sharing technical knowledge

- S-6 Access to the information needed to work effectively

- S-7 Information available to others

3) F-3 Procedures for managing knowledge: Sub codes:

- S-8 Procedures for sharing technical knowledge

- S-9 Type of information shared

4) F-4 Perceived value of knowledge sharing: Sub codes:

- S-10 Technical knowledge sharing valued in the organization

- S-11 Technical knowledge resources valued

- S-12 Technical knowledge resources to be improved to be valued

- S-13 Technical knowledge that is shared is valued by others

5) F-5 Media used for sharing information: Sub codes:

- S-14 Type of media that supports technical knowledge sharing

6) F-6 Management practices: Sub codes:

- S-15 Core organizational practices that support knowledge sharing

- S-16 Technical knowledge sharing that improves managerial practices

- S-17 Factors that facilitate sharing technical knowledge effectively

7) F-7 Organizational structure: Sub codes:

- S-18 Organizational structure that supports technical knowledge sharing

- S-19 Technical knowledge sharing that builds capacity

8) F-8 Mission and strategy: Sub codes:
- S-20 Mission facilitates to share technical knowledge
- S-21 Strategy facilitates to share technical knowledge

9) F-9 Organizational climate and motivation: Sub codes:
- S-22 Organizational climate is conductive to share technical knowledge

Appendix R. Factors and new sub factors that influence knowledge sharing

Factors	Sub factors	INGO-1	INGO-2	INGO-3	INGO-4
1) Organizational culture	1) Time management			X	X
	2) Sense of belonging			X	
	3) Human resources policy			X	
	4) Accompaniment		X		
	5) Coaching		X		
	6) Good information		X		
	7) Learning culture			X	
2) Role in organization		X	X	X	X
3) Procedures for managing knowledge			X	X	X
4) Perceived value of knowledge sharing		X	X	X	X
5) Media used for sharing information		X	X	X	X
6) Management practices	8) Adequate systematization			X	
	9) Constant and effective communication		X		
	10) Adequate channels of diffusion		X	X	
	11) Context analysis	X			
	12) Technology management		X		X
	13) Resources management	X	X		
	14) Support of the authorities			X	
7) Organizational structure		X	X	X	X
8) Mission and strategy	15) Fundraising			X	
	16) Specialization of the organization	X	X	X	X
9) Organizational climate and motivation	17) People's attitude	X	X	X	X

Source: author