

Knowledge Management in Chile: An Analysis of 10 years of Initiatives in the Public and Private Sector

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Abstract: Knowledge management is a discipline that seeks to rationalize the use of knowledge and information in organizations. Since its origins in the nineties, it has developed mainly in countries of the global north, with few contributions from and to developing countries, such as Chile. In recent years, concept of knowledge management in Chile has been used increasingly within economic, administrative, and business environments. However, despite these advances, the scarce existing research in this field does not allow us to clearly visualize the state of development of these initiatives, their characteristics, or their results. Consequently, this study seeks to contribute to the understanding of this new area of development for organizations through the qualitative analysis of twenty-four cases of knowledge management initiatives carried out in public and private organizations in Chile, between 2010 and 2020. It describes the motivations that originated the initiatives, the tools used, some of the difficulties encountered, and other aspects of interest for disciplinary development. Finally, the article concludes with an analysis of the state of development of knowledge management in Chile and a proposed typology to situate the state of progress of organizations in this area.

Keywords: Knowledge management, emerging economies, Latino America, Chile

1. Introduction

Scientific and technological advances of the last decades in Chile are transforming the technical organizational scenario and the relative weight of productive factors in the economy, making knowledge the preponderant and differentiating resource of organizations and a source of competitive advantage for companies and countries (Obeso and Sarabia, 2018; Perez-Arrau, 2015). This trend, far from waning, seems to be gaining even more strength with the arrival of the so-called fourth industrial revolution, suggesting even more radical changes in the way we will organize and work in the coming years (Schwab, 2017). In this context, a growing number of professionals and academics in Chile have become interested in understanding the nature, behavior, and use of organizational knowledge and its rational management as a productive resource.

In simple terms, knowledge management can be understood as “The ability of a company as a whole to create new knowledge, disseminate it throughout the organization, and embody it in its products, services and systems.” (Nonaka and Takeuchi, 1995, p.viii). In its development, this discipline has received contributions from diverse areas of knowledge, such as philosophy, database technologies, collaborative technologies, decision support systems, web technologies, artificial intelligence, technical writing, cognitive science, social sciences, information sciences, archive and library science, engineering, human resources management, defense, health, and engineering, among others. (Dalkir, 2017; Girard and Girard, 2015). The diversity of ideas, methods, and objective phenomena, as well as its multifaceted origin, based on varied resources and a diversity of disciplinary languages, have resulted in a disciplinary field that is not always entirely coherent (Spender, 2015). However, despite the above, today knowledge management is considered an established discipline in the field of management, with a robust body of knowledge and a permanent academic community (Serenko and Bontis, 2013).

2. Knowledge management in Chile

Although Chile, like other Latin American countries, does not present great advances in the field of knowledge management, evidence shows that during the last decade a number of initiatives linked to knowledge management have been developed in public organizations and private companies (Pérez Arrau, 2016, 2015; Liberona and Ruiz, 2013). These initiatives arise from the need of organizations to find new strategies to deal with an increasingly complex and competitive environment, a natural consequence of the country’s economic development in the last four decades, with knowledge and learning as fundamental resources for innovation, change, and adaptation (Obeso and Sarabia 2018).

Studies on knowledge management in the Chilean context include various topics, such as the importance and challenges of Chilean companies in the knowledge economy (Rojas Pescio and Roa, 2018; Torres, 2018); the role of leadership in knowledge management in SMEs (Rodríguez-Ponce et al. 2010); knowledge management of

workers in the wine industry (Perez-Arrau, 2010); strategic direction and knowledge management (Pedraza-Rejas, Rodríguez-Ponce and Rodríguez-Ponce, 2006; Rodríguez-Ponce, 2007); the implementation of knowledge management programs and tools in companies in the country (Liberona and Ruiz, 2013); case studies of the application of a knowledge management strategy in a number of Chilean companies (Griffiths and Arenas, 2013; Arenas and Griffiths, 2014); international comparative study on the acquisition of knowledge management practices in a group of OECD countries (Liberona and Fuenzalida, 2014); the knowledge management process in the Chilean port industry (Cordoba, Duran and Galindo., 2015); the instruction of knowledge management policies and practices in the public sector (Perez- Arrau, 2016); the perception of university executives regarding knowledge management (Araneda-Guirriman et al., 2017); analysis of variables related to innovation, learning, and knowledge transfer in Chilean organizations, using data from the World Bank (Obeso and Sarabia 2018); and, finally, knowledge management applications and tools applied to specific economic sectors (Segarra et al., 2017; Ñuñez et al., 2018; Araya-Guzman, 2019; Pizarro Varas-Madrid, 2019; Araya-Guzman et al, 2021).

Despite the mentioned incipient (and unarticulated) contributions, there is some degree of evidence on the existence of knowledge management practices in Chile. For example, the exploratory study carried out by Liberona and Fuenzalida (2013) on a total of 100 companies indicates that on average companies in Chile use 50.58% of the 17 knowledge management tools defined by the OECD (2001), of which the use of the internet to obtain information the most commonly used tool (74.82%). The study points out that small companies are at a clear disadvantage in the use of these technologies, and that one third of the respondents indicated that they do not have a formally established organizational policy in this regard. Likewise, the study shows that, in general, companies in Chile do not define a long-term strategy; therefore, they are unlikely to develop knowledge management policies.

The study by Perez- Arrau (2016) describes seven knowledge management projects carried out in the public sector, all in different stages of development. These projects were not always labeled as or associated with knowledge management; instead, some were treated as specific initiatives or tools, without greater strategic pretensions. As there are knowledge management practices that are not labeled as such, a reasonable doubt arises as to how many other organizations could be implementing knowledge management tools and practices, without being considered as knowledge management per se.

This study also found that the main motivation for generating these projects was the imminent loss of knowledge due to the imminent retirement of a staff member or the need to “reproduce” the critical knowledge of an organization in the short term. It was also found that the initiatives were driven by the vision of a highly motivated leaders who saw knowledge management as a development potential for their institution.

Studies by Liberona and Fuenzalida (2014) and Perez- Arrau (2016) provide some insight on the existence of organizations developing knowledge management policies and practices in Chile, under the same or similar denominations. This progress is, however, embryonic and, to some extent, delayed, especially considering the importance of knowledge for a country that aspires to take part of the fourth industrial revolution. This is because most of the above-mentioned research barely addresses relevant issues such as the objectives, the resources used, or the organizational and/or cultural barriers that must be overcome by the executors during their implementation and development, which are fundamental aspects for the successful implementation of future projects. Moreover, very little is known about the degree of success or failure of these initiatives, or how the results were evaluated. All these questions remain unanswered, and this research aims to address them.

3. The study

This study seeks to learn about the knowledge management initiatives that were carried out in medium and large organizations in Chile between 2010 and 2020. In the study, a series of aspects of each of the initiatives are identified and described to recognize the process from its origin, the decisions, and their rationale, the actions taken, the barriers and, in general, the most significant aspects of each project carried out.

The methodological approach of this proposal is purely qualitative and is framed in the tradition of multiple case studies (Baxter, P., and Jack, 2008; Vasilachis de Gialdino, 2006). A case study methodology was chosen for two reasons. First, because, as an unprecedented research in Chile, it was important to know in detail the why and how of each of the experiences, in a less structured way; in such a way that it would allow inquiring into aspects not known in the literature or that escaped the researcher’s background. Second, because of the importance

of the context and the specific circumstances in which these initiatives were generated, which could give a specific and unique meaning to the actions carried out, which differ greatly from the cases described in traditional literature. Both conditions make the case methodology particularly appropriate for this type of research.

In total, 24 cases of public and private organizations, from different economic sectors, ownership, and sizes were constructed and analyzed (see Annex 1). The sample of companies by theoretical convenience, rather than statistical criteria, through the Knowledge Community, alumni of the diploma program in knowledge management, and other contacts of the researcher. The analysis of the cases was carried out through qualitative examination and the development of emerging categories with the support of NVIVO software.

4. Origin of the initiatives and objectives

Within the organizations studied, a common cause that explains the origin of knowledge management initiatives was the need to “preserve” the critical knowledge in the possession of a worker or group of workers, when they are about to retire or be absent for a long period of time. The first of these situations tends to occur mainly in public sector organizations (or companies that were public in the past) in which job permanence is generally of many years and, therefore, people accumulate a large amount of specific and contextual tacit knowledge. Thus, the departure of a key officer can become a considerable threat to an institution by jeopardizing the proper performance of operations in an area. For example, among the organizations studied, we found that the warning signal about the need for a knowledge management system to support critical knowledge started when one of the people who knew best how to operate a large electricity generating machine was recruited by the competition, exposing the dramatic dependence of the organization on this person’s unique knowledge. In the words of the person in charge of the knowledge management project, “...a worker like that puts together and takes apart a turbine like someone who puts together and takes apart a household blender at home” and then pointed out how difficult it would be to find a replacement in the short term.

Likewise, the knowledge of a public service inspector who detects anomalous or illegal situations in a procedure was described by one of the interviewees as “exceptional” in terms of identifying signals that lead to inspecting this type of situation. In this sense, the inevitable loss of a significant number of inspectors as a result of their upcoming retirement set off alarms in that organization regarding the possible loss that this would entail in their performance, triggering the decision to initiate a knowledge management plan oriented towards knowledge transfer. In the specific case of this institution, a unit was created whose purpose was to identify the “knowledge” and fundamental competencies of the organization to subsequently create a course curriculum on these subjects, taught mainly by the institution’s most experienced employees. In addition, the institution developed a map of experts; a training plan for trainers; an e-learning system; and the creation of discussion and exchange groups among officials who are experts in specific subjects, like the so-called communities of practice.

In another of the organizations studied, a small digital marketing agency, knowledge management emerged as a response to an unexpected situation of prolonged absence of two female staff members performing the same work, the two of them being the only ones responsible for that work in the entire organization. The two people would take their pre- and post-natal leave in the near future, producing a complicated knowledge gap that would be difficult to replace in the short term. It was only after this situation that the organization became aware of the risk involved in concentrating critical knowledge in a few hands, and so it was decided to start a project to identify critical knowledge, which would later reveal other vulnerable areas in this field.

A second origin of the knowledge management initiatives encountered was the search for higher quality in management and products. The idea was to improve processes based on the experience of its collaborators, both successes and failures, through the development of instances of collaborative dialogue. The idea was to create instances of learning and continuous improvement through collaboration and synergy between units. These instances included geographically dispersed units, even across borders. This is the case of an engineering company with operations in Chile and Brazil, which developed a knowledge management project that included the identification of critical knowledge in both countries, and then managed its transfer and adoption.

Thirdly, many companies developed knowledge management practices with the purpose of innovating through the ideas and proposals of their collaborators. Although innovation can be seen as part of the continuous quality

improvement process, it is presented here separately because in some of the organizations studied it was explicitly proposed as a different objective from quality. For example, in one digital marketing company studied, knowledge management was associated with data research to bring offers to the customer, through dissemination in digital media. Similarly, a large pharmaceutical company developed several innovations from leveraging the knowledge of its experts, with some of these innovations receiving international recognition for their originality and usefulness.

Another objective frequently mentioned by interviewees was learning. In many of the organizations, learning was seen as the desired outcome of knowledge management policies and practices, which in turn could be used as an input for innovation, continuous quality improvement and better decision making. Among the organizations studied that had this purpose as a priority was a higher education institution whose objective was to preserve the learning gained through the implementation of a large educational quality improvement project. The leadership team was convinced that the implementation of the project would bring with it many valuable experiences, worthy of analysis and use as learning resources for the institution.

Likewise, a public service linked to the judiciary developed knowledge management practices that sought to analyse and learn from past mistakes in which its own professionals had participated. The fact that this organization carried out reviews of the actions and decisions made during a judicial process, with a critical and learning perspective, deserves to be highlighted, considering that the characteristics of the Chilean organizational culture are not a favourable scenario for criticism (Hojman and Perez-Arrau, 2005). Lastly, the research was informed about the case of a construction company that developed retrospective analysis processes of the after-action reviews type, oriented to the review of actions taken and decisions made in a given construction project. Here, the objective was to learn from the experience by creating an environment of respect and tolerance, in which problems and difficulties could be openly exposed.

Another objective found among these initiatives was to improve decision-making based on the deployment of tools linked to the use of information. In the projects that were initiated with this objective, the intention was to rationalize the use of valuable data or information using digital tools for this purpose. This is the case of a Santiago law firm that decided to initiate a knowledge management project oriented to the systematization of information, and its deployment in a more rational way, to facilitate the construction of more effective legal proposals through the analysis of past reports, jurisprudence, rulings, etc.

It was also found that some organizations started their knowledge management project from a traumatic experience, for example, a costly procedural error. In response, the organizations created original mechanisms to seek, at least partially, the best use of knowledge and/or information in their unit.

5. Unit in charge of executing the initiatives and start year

The question of the structural location of knowledge management professionals and projects is not trivial, especially considering that most organizations in Chile do not have an administrative area dedicated to this subject, and the fact that it is a relatively new discipline in search of an identity. Moreover, considering the diverse and at the same time controversial origin of knowledge management, and its initial tendency to adopt the technical perspective of information management (Hislop, 2010), it is worth asking which organizational areas have taken on the challenge of leading these initiatives.

Of the 24 initiatives studied, 14 of them, i.e., 58% of the cases, were led by the human resources area. In 4 cases, i.e., 17% of the total, it was a knowledge management unit per se, and in 6 cases, i.e., 25%, it was another unit or department (e.g., quality management, operations, etc.). This is not surprising, considering that many of the organizations studied came to knowledge management because of the imminent loss of critical human resources and, therefore, it is to be expected that these same areas will be the ones concerned with developing systems, policies, and practices to help avoid problems of this nature. Perhaps more interesting, from the research point of view, is the fact that there are four cases of organizations whose knowledge management executing unit is called "knowledge management" itself, in a context in which this discipline has had a relatively slow advance in terms of its popularization in academia and the organizational environment. Thus, the fact that some organizations incorporate a unit devoted exclusively to the field of knowledge management generates some degree of optimism regarding the future of this discipline in the world of business administration.

6. The present of knowledge management in Chile

A first analysis of the results of this research indicates that, although knowledge management is a subject of growing interest, it is still a little explored area in organizations. Proof of this is the difficulty encountered by the author of this research to find organizational experiences of knowledge management carried out in the past or in the present. Considering that, in addition, this study did not use probabilistic techniques for the identification of cases but reached each one through personal contacts and specific groups, it is even more evident that knowledge management is not a common practice in the world of administration in the country. On the contrary, as will be explained below, the effort to carry out these initiatives or to disseminate them in the professional or academic field tends to be concentrated in a handful of people, a few companies, or institutions, who have been developing knowledge management in Chile for years.

Secondly, knowledge management tends to emerge as a reaction, rather than from a long-term vision. This is because, unlike other proposals for organizational change, which emerge in advance as part of a medium- or long-term strategic proposal, the knowledge management initiatives encountered generally respond to problems that were already present or imminent, which negatively affected the organization. Moreover, in most cases, knowledge management was adopted in a rather timid way, sometimes with modest "pilot" initiatives, to which more resources were later allocated as they were able to demonstrate good results. Many of them started with a single person in charge, and later included more people in the team. Thus, it seems that knowledge management is not on the list of priorities of company directors and senior executives.

Third, this study found that organizations are increasingly concerned with learning from past experiences and transforming them into a resource for change and innovation, including the recognition of failures, waste, and human error. This trend is interesting in that it represents a countercultural behaviour that moves away from the traditional authoritarianism and paternalism of Chilean organizational culture (Rodríguez and Gómez, 2009).

On the other hand, the most popular knowledge management tools found in these initiatives were: lessons learned, communities of practice, corporate universities, knowledge bases, after action review (AAR), document management and mentoring. The organizations included in the study tended to have more than one tool in place and they are generally implemented one at a time.

An interesting aspect found in this study was the participation of the consulting firm Catenaria (now Knowledge Work) in almost all the cases included in the study. With almost 20 years of presence in Chile, this company has led knowledge management in most of the organizations that have carried out initiatives in the country, taking part from the origin (diagnosis) to the development and evaluation of the projects. In this sense, we could speak of the "catenarization" of knowledge management in Chile. This particularity in the way in which knowledge management arrived and developed in the country could have consequences that would be worth exploring in future research.

1. It was also found that most of the initiatives described in this research originated in the last five years, which confirms the findings in the literature that knowledge management is a relatively recent phenomenon in the Chilean organizational environment.
2. It was found that the main barriers to carry out these initiatives coincide, to a large extent, with some of the characteristics of Chilean culture and society described in the literature of organizational studies, such as: lack of trust; great power distance in labour relations; lack of communication skills; paternalistic organizational culture, to mention a few (Hojman and Perez-Arrau, 2005; Rodríguez and Gomez, 2009). Also, the problematic measurement of the results of knowledge management initiatives and the lack of training of managers in knowledge management techniques and tools were other adverse factors.
3. Finally, as previously mentioned, there were significant differences among the organizations studied, in relation to their state of development in knowledge management. While some were timidly initiating their first practice oriented to knowledge management, with evident insecurity regarding the steps to follow and uncertainty regarding the results, others showed clear objectives, a defined structure and prepared professionals. This study proposes a classification scheme based on the characteristics found.

7. Conclusions

This research is a significant contribution to the understanding of a recent organizational phenomenon, which is the arrival of knowledge management in Chilean public and private organizations. Understanding that, to date, has been incipient and fragmented; among other causes, due to the incipient state of research on the subject in

universities and research centres in the country, and because of the low number of initiatives carried out in organizations.

Secondly, this article highlights the fact that it describes in depth twenty-four cases of organizations, private companies, and public institutions, that have implemented knowledge management projects between 2010-2020, being one of the most comprehensive studies published so far in the country.

In addition, the fact that this study was conducted using the qualitative methodology of multiple cases, contributes to a greater understanding of the experiences lived and the meanings attributed to it by the professionals in charge of these initiatives, thus allowing a better understanding of their actions, decisions, adversities and even results obtained in the execution of these initiatives. Likewise, the methodology used allows a better understanding of the complex nature and influence of the context in the origin and development of these initiatives, a dimension that is increasingly relevant to the understanding of organizational phenomena.

Thirdly, this study proposes a system for classifying the state of development of knowledge management in an organization, based on the characteristics found in the companies studied, whose value could be to provide future researchers with a perspective for evaluating progress in this field.

Finally, the results presented in this research allow creating a moderate state of optimism among those interested in this topic, since, although it shows that there are successful knowledge management initiatives in Chile at present, a community of stakeholders, and even a handful of academics and researchers in the field, it also shows the embryonic state of this field in the country and the theoretical aspects that still need to be known.

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Appendix

LIST OF ORGANIZATIONS INCLUDED IN THE STUDY		
N°	ACTIVITY/ECONOMIC SECTOR	CASE FOCUS/KNOWLEDGE AREA
1	Mining	Mineral exploration/geology
2	Retail	Continuous quality improvement
3	Education	Learning – Continuous improvement
4	Occupational health	Learning-Innovation
5	Public services	Emergency management
6	Legal study	Legal case studies - Decision making
7	Mining	Production process improvement
8	Pharmaceuticals	Process and product innovation
9	Energy	Critical knowledge retention
10	Energy	Distribution of critical knowledge-competencies
11	Services	Organizational intelligence - Distribution of critical knowledge
12	Public service	Critical knowledge retention and distribution
13	Public service	Critical knowledge retention and distribution
14	Public service	Critical knowledge capture and distribution
15	Public service	Learning
16	Public service	Learning
17	Public service	Critical knowledge retention and distribution
18	Public service	Distribution of critical knowledge-teaching
19	Sanitary water	Continuous improvement - cost reduction
20	Public service	Decision making
21	Forestry sector high R+D technology company	Innovation
22	Public sector	Process innovation - continuous improvement - critical knowledge retention and distribution
23	Digital marketing services	Critical knowledge retention and distribution - client service improvement
24	Engineering projects services	Innovation, quality improvement, costs.