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The role of a knowledge leader in a changing organizational environment. A conceptual framework drawn by an analysis of four large companies

Bernardo Bertoldi, Chiara Giachino, Camillo Rossotto, Nathalie Bitbol-Saba

Abstract

Purpose: The purpose of this paper is to investigate the role of knowledge leader readiness within large companies operating in a changing environment.

Design/methodology/approach: A conceptual framework emerged from an analysis of four large companies and a review of the knowledge management literature. Secondary research was conducted to compare the four large companies against our proposed framework.

Findings: The conceptual model is a support to understand an *organizations' reaction to external changes* and the role of the knowledge leader's readiness in managing these changes and adjusting the knowledge management accordingly. From the analysis, it emerged that a knowledge leader's readiness plays a relevant role in a changing organizational environment due to his ability to acquire, handle and diffuse knowledge within the company.

Practical implications: The study emphasizes the significance of internal knowledge in managing changes. Practitioners could use this framework as a conceptual guide for their daily challenges and to recruit future leaders.

Originality/value: This study aims to contribute to the knowledge management literature by providing a practical model for organizations facing a changing environment. The originality of the model is the design of different managerial profiles that combine the *leaders' disposition to knowledge* and their ability to drive change.

Keywords Knowledge management; knowledge leader; changing environment

Paper Type Research paper

1. Introduction

Changes are daily challenges for companies, and companies need to be more inclined to adjust their organizational environment to those changes if they are to survive in the market (Kotter, 1996; Todnem By, 2005; Campanella et al., 2017). However, the current market is volatile, and a strategic plan can last no more than 3 years; although a business needs to continually adjust to the external situation (Kotter, 2012; Bresciani et al., 2016).

Additionally, a company can prepare its own organizational environment by employing a solid, robust knowledge management strategy (Snyman and Kruger, 2004; Del Giudice et al., 2017; Ferraris et al., 2017b). This would enable knowledge transfer and acquisition between the external and internal organizational environments (Dayan et al., 2017; Ferraris et al., 2017a; Santoro et al., 2017). On this basis, a leader needs to identify the right

process to make changes and spread knowledge within a company. Changes should be frequently introduced to mentally and practically prepare employees to exploit and explore new opportunities (Meyer and Stensaker, 2006; Graetz and Smith, 2010). In this scenario, a key intangible asset is 'knowledge and know-how' (Grant, 1996; Davenport and Prusak, 1998; Schiuma, 2012; usly et al., 2015; Scuotto et al., 2017). Therefore, the level of knowledge must be cultivated daily through the commitment of the entire organization, as constant small adjustments created by all units in the company lead to substantial change (Weick and Quinn, 1999), which becomes a core competence leading to the success of the organization (Todnem By, 2005; Deeg, 2009; Crawford and Nahmias, 2010). The communication of objectives is fundamental to not only promote the organizational culture but also to redesign the knowledge agenda and to share knowledge. Effective managers should act as knowledge leaders and should be able to provide strategic visions and effectively communicate the knowledge management goals to support with the company's values and future objectives (Ndlela and Du Toit, 2001; Wang and Slotine, 2006; Singh, 2008).

Despite the importance that both knowledge and information have in all organizations, few leadership theories have attempted to understand how leaders can manage those two elements to successfully drive the company in a changing environment. Moreover, notwithstanding the amount of studies on organizational knowledge, studies on knowledge management from a leadership perspective are missing in the literature.

This study aims to fill this gap by contributing to the extant literature, developing and analysing a conceptual model describing the role of a leader in managing knowledge and changes in a dynamic environment. The conceptual model has been drawn based on the literature review and illustrative case studies (Siggelkow, 2007). Section 2 reviews the literature on knowledge management and suggests its importance in a changing environment. Section 3 discusses the role of knowledge leaders and mental representation. Section 4 discusses the literature on elements managed by a knowledge leader such as vision, drive, speed and direction. Section 5 presents the methodology of the research. Section 6 develops the conceptual framework drawn from the literature and the illustrative case studies. Section 7 concludes with interesting implications, discusses the limitations of the study and proposes future lines of research.

2. Knowledge management in a changing environment

Change management can be defined as "the process of continually renewing an organization's direction, structure and capabilities to serve the ever-changing needs of external and internal customers" (Moran and Brightman, 2000; p. 66). Theorists from the knowledge based field suggest that knowledge management is a key response to survival in a changing environment where business models and competitive advantages are constantly threatened (Hedlund, 1994; Pérez-Bustamante, 1999; Easterby-Smith and Prieto, 2008). Knowledge is linked to people, it derives from

different elements, mixing formal and structured processes as well as personal and informal processes (Davenport and Prusak, 1998), and it can represent a source of sustainable competitive advantage in a dynamic environment (Grant, 1996; Davenport and Prusak, 1998). Determining the correct way to transfer expertise and knowledge from experts to other people in the company is key to achieving success (Hinds et al., 2001), especially in a changing context. For these reasons, many companies have invested time and money in knowledge management initiatives and systems. However, the results do not always meet the expectations (Wang and Noe, 2010).

Some studies indicate the importance of top management in implementing an effective information and knowledge system to keep up with rapid changes (Wiig, 2003), as well as the importance of and the effective methods for knowledge creation and communication throughout an organization (Nonaka, 1994; Choo, 1996; Bollinger and Smith, 2001; Choo, 2006; Singh, 2008; Rusly et al., 2015). The problem is that managers often underestimate the organizational and interpersonal context and the individual characteristics of the people involved in the process (Voelpel et al., 2005).

In this context, the organization fails because of the following reasons: lack of ambition in achieving multiple objectives; inability to involve and support employees, executives or employees who are reluctant to modify their habits (Keller and Aiken, 2009; Hughes, 2011; Brown, 2014; Tudor, 2014); resistance to change (Mishra, 1996; Kotter and Schlesinger, 2008); cynicism that can disrupt the relationship between organizational learning and successful organizational change (Imran et al., 2016); the unpreparedness to share knowledge (Rusly et al., 2014); the lack of motivation to share tacit knowledge (Rusly et al., 2014; Trusson et al., 2017); and the absence of manager support to the knowledge sharing culture (de Almeida et al., 2016) or managers that do not consider the presence of bankruptcy costs resulting from change (Isern and Pung, 2007).

For these reasons, knowledge has become an important subject in management studies, as it can significantly influence organizational performance and development, especially in an environment that is continuously changing.

Bailey and Clarke (2000) describe knowledge management in the following way, as something created by managers: “how managers can generate, communicate and exploit knowledge (usable ideas) for personal and organizational benefit”, while Bhatt (2001) used a five steps process composed of “creation, validation, presentation, distribution, and application. These five phases in knowledge management allow an organization to learn, reflect, and unlearn and relearn, usually considered essential for building, maintaining, and replenishing of core-competencies”.

Considering the importance of the organization’s ability to exploit and explore knowledge, managing organizational knowledge has become a significant issue in the knowledge management discipline (Alavi and Leidner, 2001). The key to knowledge integration is the positive attitude of top management towards the acquisition and the interaction of knowledge (Alavi and Leidner, 2001; Donate and de Pablo, 2015; Rusly et al., 2015; Tardivo et al., 2017).

The difficulty in understanding and managing knowledge in a company lies in the fact that it is a dynamic process of sharing and learning within a company (Bock et al., 2005; Singh, 2008). Thus, the successful implementation of knowledge management depends on the managers' ability to acquire, handle and diffuse knowledge throughout the organization (Dayan et al., 2017; Singh, 2008; Scuotto et al., 2017; Vrontis et al., 2017), while considering the external environment.

3. Knowledge leaders and mental representation

Despite the importance that both knowledge and information have in an organization, few leadership theories try to understand how leaders can manage those two elements with success (Davenport and Prusak, 1998). While it was sufficient to have one knowledge leader in an organization several decades ago, today the knowledge has to be present at all levels (Singh, 2008). The knowledge leader is "the one who indicates how to go" (Wang and Slotine, 2006) and has a strong influence on how the company adapts to changes.

More specifically, the role of knowledge leader is to provide strategic visions, motivate, communicate and give direction (Debowsky, 2006), driving the company in a changing context. To turn the vision into drive, it is necessary to put into practice a set of objectives, values and expectations that are initially established. A clear communication strategy is necessary to create interest, engagement and commitment. Moreover, the strategy, before even describing what an organization is going to do, concerns the way in which management explains to people what is occurring and what their role will be (Schiemann, 1992), so that there will be full cooperation and a common vision. Similarly, managers should communicate with the other departments to distribute and exchange knowledge for the long-term needs of the company. For this purpose, managers should be able to clarify the objectives and the responsibilities of the people in each department, and create appropriate visions and give directions (Bailey and Clarke, 2001).

From a managerial point of view, the ability to pilot any organization is linked to the concept of mental representations, or "a mental structure that corresponds to an object, an idea, a collection of information, or anything else, concrete or abstract, that the brain is thinking about" (Ericsson and Pool, 2016). These representations belong to each individual, but only the experts, i.e., the knowledge leaders in a particular field or industry, are able to make quick and effective decisions, thanks to the personal and proprietary database of a large number of high-quality mental representations: the better the representation, the more effective the planning. This concept is underlined by Maurik (1999), who discusses how knowledge leaders can operate effectively only with a deep understanding of the core business issues and the values present in the organizations. Those facts enable leaders to have a positive influence on the organization, above all when it is necessary to take a clear direction (Debowsky, 2006).

In one study involving professional chess players who were blinded and played at the medium and beginner level, the findings highlighted that each person identifies a mental process that helps them choose the best move, concluding that "mental processes are seen in expert performers in every field and hold the key to understanding their extraordinary abilities" (Ericsson and Pool, 2016). More precisely, mental representations depict the organization of the cumulative knowledge that enables an enhanced categorization of information and facilitates the explanation and the prediction of a given situation. Mental representations could also promote the accumulation of new knowledge to upgrade existing representations or create new representations. Thus, mental representations could lead to more effective decision-making (Tashman, 2013).

To have a clear mental representation of the context in which a person lives, he should not count the number of changes made, but the quality with which these changes are occurring; the more rigorous the analyses that are carried out, the easier it is to identify the right strategies to implement and the possible countermoves (Sola and Couturier, 2013). Similarly, knowledge leaders, as people that decide how to proceed (Wang and Slotine, 2006), must possess the management skills and mental representations that enable them to define the best strategies that will lead the company to success. This will allow experienced managers – knowledge leaders - to have a perfect view of what is occurring in the external environment: "the mental representations give masters a view of the forest that novices lack, they also allow masters to zero in on the trees when necessary" (Ericsson and Pool, 2016).

4. The elements managed by a knowledge leader: vision, drive, speed and direction

The role of a knowledge leader is to provide strategic visions, motivate, communicate and give direction to drive the company in a changing context (Debowsky, 2006; Singh, 2008).

The vision is the set of expectations, ideals and values for the long-term goals, which are defined to implement an action plan for internal decision making, following an economic forecast (Ozdem, 2011; Hermarij, 2016). In the absence of clear objectives, it is impossible to drive the company towards a future vision (Oakland and Tanner, 2007). The vision alone is not enough, because an organization needs a knowledge leader who has the talent to drive the change by involving all levels and is able to communicate the objectives to be achieved (Taylor, 1999). Drive is the ability to manage the process. Once the vision is defined, a manager should know what needs to be done to change (Bailey and Clarke, 2001; Singh, 2008), and he drives the whole organization towards the future.

Moreover, the ability to depict the speed of change and its direction is fundamental. The speed can be low or high. Referring to Darwinian and NeoDarwinian (Darwin, 1859) theory, speed is defined as the rate of change of the external environment. When a company keeps up with the speed of change, i.e., moves at the same rate of change, the leader will be able to

adapt the organization to the external environment. In the absence of such an ability, however, the company will face extinction, just as if it were a species existing in nature. The adaptation of a company to the external environment's "high speed" changes necessitates not only the examination of the practices that lead to a competitive advantage but also embracing organizational learning, to take advantage of effective knowledge acquisition and the new knowledge creation (Cheng *et al.*, 2014). The exploration and exploitation of knowledge is indispensable for organizational development in a high-speed environment (Choo, 2006).

As explained by Russell (1925), illustrating the theory of relativity, when someone shouts on a train that is moving very fast, a person on the train he will hear the voice simultaneously, but if the person is on the ground looking at the train, he will hear the voice with a delay. In this context, a "high speed" indicates that a company is faster than the environment, therefore it will grasp and absorb into its knowledge system the inputs of change before they have an impact in the competitive arena; on the contrary a "low speed" indicates that a company is slower than the competitive environment and, therefore, will receive evolution inputs later.

The "direction" is represented by a leader that leads the organization, either in the same direction in which the external environment is evolving, or in the opposite direction.

A knowledge-oriented leadership stimulates the creation, transfer and application of new knowledge, improving the company's capabilities and innovation performance (Donate and de Pablo, 2015). Hence, a knowledge oriented leader is capable of keeping pace with the external changes, and accumulates new knowledge stemming from the external environment. When a company changes rapidly in line with the direction of the external environment, it will remain successful in the competitive arena. However, when a company is unable to detect the direction or keep the rhythm of change, especially if it has low knowledge accumulation capabilities, it will risk being expelled from the competitive arena.

5. Methodology

5.1 Research design

The aim of this paper is to investigate the role of knowledge leaders in companies operating in changing environments. To reach this goal, we develop a conceptual framework drawn from the literature and perform secondary research on four large companies such as General Motors, Fiat Group Automobile Capital (now FCA Bank) and RAI (Radio Televisione Italiana). This approach is often used by management studies to explain theories in a persuasive way (Siggelkow, 2001, 2002, 2007). The choice of the multiple illustrative case study is motivated by the limited research conducted on knowledge management in the context of changing environments from a knowledge leader's perspective.

Yin (2004) defines a case study as “**an empirical inquiry that investigates a contemporary phenomenon (the “case”) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident**”. Following this description, we have chosen the qualitative approach to investigate the role of knowledge leaders in changing environments in depth. The qualitative approach is selected to evaluate and explore real-life cases over time through observation, documentation, reports, and through interviews with managers that worked in the companies. The managers were referred in the case studies as a way to investigate in-depth the organizations’ reaction to the change process (Creswell and Poth, 2013). This method is appropriate for theory building and development, especially if two to six cases are included in the study (Eisenhardt and Graebner, 2007). We collected data from various resources, using the triangulation method, to provide accurate and high-quality results (Verschuren, 2003; Yin, 2014; Hancock and Algozzine, 2016).

The documentation collected includes manager’s personal documents, e-mails, meetings and other internal documents. Company’s private historical records and publicly available data are collected to build the case studies. Access to a variety of data was available because the manager that is the object of the analysis is one of the co-authors. The manager’s position in the companies provided the opportunity for direct observation and participation in the studied actions as well as access to information that would otherwise be unavailable (Yin, 2014). Finally, interviews with the manager were conducted to identify other relevant sources of evidence and to help build the conceptual framework.

5.2 Methodology: Secondary research conducted on four large companies

The four large companies were selected based on how they address environmental changes. These two criteria offer a broad analysis of the investigated topic. In addition, other criteria include the robustness of their management system and organizational knowledge system.

The following four large companies were investigated and are described below, along with the position held by one of the authors, as it relates to the companies investigated.

- **General Motors (GM)** is an American automotive corporation headquarters in Detroit, Michigan. The company was, for a long period, the biggest global producer of cars and commercial vehicles. It went bankrupt during the financial crisis of 2009 and was bailed out by the US Government. For the purpose of this research, GM has been analysed between the years 2000 and 2009, when the slow, relentless crisis occurred, which led to the bankruptcy. The knowledge leaders identified are the CEOs of the company during the period. One of the author was exposed to the case as key manager of the Fiat-Gm financial and industrial alliance and can infer conclusions based on his experience and relationship with the identified Knowledge leaders.

- **Chrysler** is one of the "Big Three" American automobile manufacturers with headquarters in Auburn Hills, Michigan, which sells vehicles under the brands Chrysler, Dodge, Jeep, and Ram Trucks. For the present research, Chrysler has been analysed between the years 2008 and 2012 when the company went bankrupt and was bought out by FIAT in an agreement with the US government and the US automotive unions. The knowledge leaders identified are the CEO and the COO of the company during the period, Robert Nardelli and Tom Lasorda, respectively. One of the authors was exposed to the case as key top manager of Fiat.
- **Fiat Group Automobile Capital** (now FCA Bank) is a 50/50% joint venture (JV) between Fiat Chrysler Automobiles and Crédit Agricole Consumer Finance dedicated to motorists, which mainly operates in the automotive financing sector and cooperates with prestigious automotive brands, i.e., Alfa Romeo, Chrysler, Fiat, Fiat Professional, Jeep, Abarth, Maserati, Jaguar and Land Rover. For the present research, FGA has been analysed from the launch of the joint venture until 2010. The JV was the first and is still the only long term joint venture between a bank and a carmaker to supply credit to the automotive value chain. The knowledge leader identified is the top management of the company during the period. One of the authors was a key top manager in the Fiat financial department during the first phase and was later the CEO of the JV.
- **RAI – Radio television Italiana** is the Italian public broadcaster, which operates many television channels and radio stations and is owned by the Italian Government through the Ministry of Economy and Finance. RAI has been analysed between 2012 and 2016, focusing on the following two topics: the slow transition to a new way of consuming television digital content and the spin off and listing in the Italian financial markets of its broadcasting infrastructure, i.e., RAI Way. The knowledge leaders identified for the RAI Case are the Managing Directors during the period analysed. One of the authors was the Chief Financial Officer of RAI and the Chairman of RAI Way.

6. The role of a knowledge leader in a changing environment: developing the conceptual framework

This section provides a conceptual framework that can be deployed to maximize the understanding of the situation in the change planning phase and of the effectiveness of the knowledge leader in the execution phase. The framework is drawn from the literature review and is illustrated by data gathered from the case studies. All organizations involved in this research experienced an internal impact caused by the changes that occurred in the external environment. These organizations reacted differently to the challenge of change, which determined the positive or negative result of their internal transformation. The organizations' diverse perspectives to the internal change and the relative results were described in detail and compared to identify and elaborate both the correct and inadequate practices of the organizations.

The framework is explained by the following two diagrams: the speed/direction for the planning and the vision/drive for the execution. The first diagram refers to the method for managing the knowledge assimilation process, whereas the second diagram provides the managerial profiles of the knowledge leaders. On the other hand, the authors analysed the abovementioned large companies to investigate the consequences of speed and direction of change in relation to companies that have managed changes in the past in different contexts.

The second diagram, drive-vision, considers the “direction” factor of the first diagram to underline the importance of a knowledge leader profile.

Based on the assumption that the adaptation and the internal response of an organization to a rapidly changing environment could lead to a sustainable competitive advantage (Graetz and Smith, 2010; Rusly *et al.*, 2015; Crawford and Nahmias, 2010; Deeg, 2009; Todnem By, 2005; Wiig, 2003), we have created a framework that describes the organizational change through the correlation between the speed of events (speed) and the direction of change (direction). The diagram presents a zero point, with coordinates (0;0), where there is the situation of an organization that operates in a context in which there is complete balance, with the absence of change. However, since this would seem to be a utopia, the authors considered analysis situations that may occur in case of change.

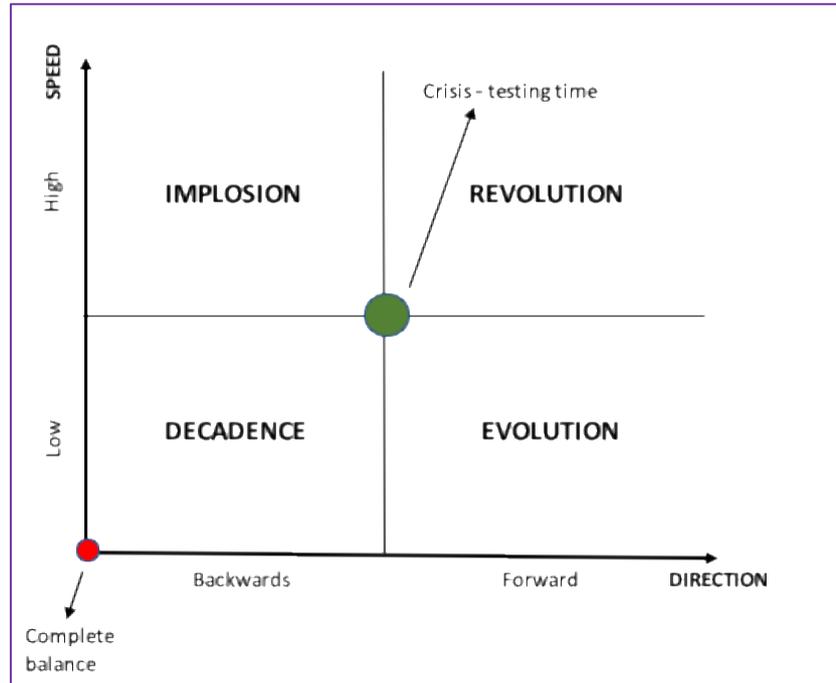
The speed (Y axis) defines the speed of the changes (low, high), which is therefore relative to the speed of change of the external environment, i.e. the relative speed.

A “high speed” scenario is represented by a company that has launched a full range of coffee’s pods before a widespread base of pod coffee machines are introduced in the market. Once the base is installed, the company will be the preferred choice by the customers, who are already familiar with the company’s complete product mix. Another example of a “high speed” company is a car company that launches a complete product mix of fully electric cars, well before an industry standard is established. A “slow speed” company, on the contrary, would launch an old-fashioned diesel engine product line of cars.

The “direction” is represented by a knowledge leader that leads the organization, either in the direction in which the external environment is evolving or in the opposite direction. Organizations can proceed in the same direction as the external change either through inertia, i.e., without a leader’s drive as it is possible to see in the following matrix, or understanding and embedding in the company’s knowledge system the inputs of the change and acting proactively. Proceeding in the opposite direction of the external environment means going backwards. On the other hand, a knowledge-oriented leadership stimulates the creation, transfer and application of new knowledge, improving company’s capabilities and innovation performance (Donate and de Pablo, 2015). Hence, a knowledge-oriented leader will be capable of keeping pace with the external changes to accumulate new knowledge stemming from the external environment. When a company performs a rapid change following the direction of the external environment, it will remain successful in the competitive arena; when a company is unable to

detect the direction or to keep the rhythm of change, especially if it has a low knowledge accumulation capability, it will risk being removed from the competitive arena.

Figure 1 Diagram of speed-direction



The intersection of the two variables (speed and direction) generates four different situations: implosion, decadence, evolution and revolution.

Implosion: if the internal change occurs slowly or moves against the direction of the external change, which is occurring at a high speed, it is called implosion, i.e., the company will tend to implode and eventually fail.

Chrysler in 2009 is a case of implosion. The company managers were focused on growing and launching new products for the coming year, while the external environment was entering a severe financial and economic crisis. Chrysler managers did not spot the competitive environment direction and speed of change and were surprised by the abrupt market collapse of the coming year. In a market that was contracting from 14 M to 10 M cars a year, the managers were planning to grow: i.e., they were going in reverse to the market direction and the external environment was moving fast.

Decadence: is the case in which the speed of change of the external environment is low and the organizational change goes in the reverse direction, then there is a deterioration, a decadence, i.e., the process through which the enterprise is found in is a condition less advantageous with respect to the one previously occupied.

General Motors from 2000 to 2009 went through a phase of decadence where the company did not push to new market segments and to new technology in the automotive industry, remaining substantially dependent on the US SUV and light trucks segments of the market. The industry was moving towards a more polarized segmentation in the luxury cars, SUV and smaller car segments, i.e., A and B segments. GM didn't follow the competitive environment trend and in less than ten years lost its technical and product leadership; then, on the verge of the 2009 financial crisis, GM entered the bankruptcy process.

RAI, as a public company and the Italian leader in TV broadcasting, has not reacted timely regarding the digital revolution. In a few years, the audience switched from TVs to tablets and smart phones and from a traditional consumption of standard TV programmes to a more complex consumer experience. New entrants, such as Netflix and Perform, suddenly changed the way in which the consumer experiences movies, series and sports and other live events. The RAI management was slow in reacting to the market environment and launching its proprietary tablet application. In this case, the relative low speed of the competitive forces gave the managers time to change their strategy and to start the execution.

Evolution: if the process of change leads to a slow improvement, an organization will experience what is called an evolution, i.e., a situation in which the company engages in a slow and incremental process of change (Tushman and O'Reilly III, 1996), which often causes the company to become more complex, different and higher than the previous period, so it is a gradual development, through which the company will change at the same speed as the external environment, which is done through a well planned growth process as follows: "evolutionary theory that focuses on changes proceed through a continuous cycle of variation, selection, and retention" (Van de Ven and Poole, 1995).

FGA Capital, the JV between FCA and Credit Agricole, was an avant-garde strategic move in a slow speed competitive environment. Since the GM Sloan GMAC in the 20' carmakers had a lending arm to facilitate the customer investment in a new vehicle. The sophistication of these carmaker financial institutions and the extension of services offered by commercial lending and consumer finance banks created the conditions to set up a Joint Venture. The competitive advantages of this JV are, on one hand, the ability of the traditional bank to efficiently raise money in the financial markets and take the JV the banking approach and processes; on the other hand, the knowledge of the car market and the remarketing capability of the car makers. For example, the ability to remark a car once repossessed incredibly increases the probability of lowering the loss on the collateral. Fiat Group Automobile Capital was the first JV between a bank and a carmaker and it continues to succeed with incredible economic success and mutual satisfaction. The JV was the first agreement between a bank and a carmaker, and it remains the only 50/50% JV in the competitive landscape, demonstrating a forward-looking approach and the capability of the two entities to share the knowledge of their knowledge leaders.

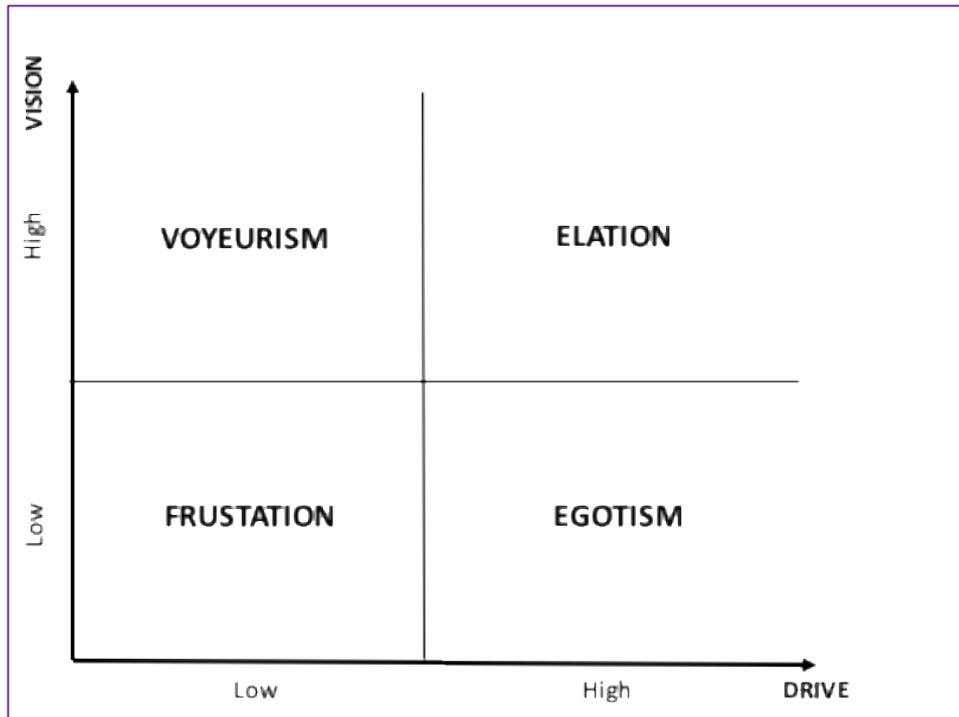
Revolution: is the situation in which the company undertakes complete and radical change in the organizational structure, completely changing the competitive paradigm (Tushman and O'Reilly III, 1996). This adaptability to the successful change the organizational structure rapidly is inextricably connected to knowledge management. Specifically, the knowledge acquisition, integration and communication throughout a company constitutes the decision-making tools necessary for an effective organizational restructure that leads to organizational effectiveness (Zhen et al., 2010).

The RAI spin off, RAI Way, was changing towards the future direction of the competitive environment and was made at an incredibly high speed. The television content and broadcasting industry entered a disruptive period generated by digitalization and the introduction of multi-content streaming providers, e.g., Netflix. Given the level of competition and the increasing number of national and international competitors, the industry undertook a sudden change in structure. Consequently, there was an opportunity to spin off from the traditional broadcasting business, which was historically owned by the broadcaster, and focus on serving the internal needs of the company. RAI Way was created and listed in the Italian Stock Exchange in less than five months, repositioning the business in the new competitive environment as a private and efficient company with a strong balance sheet. The high-speed forward-looking decision was executed with an extraordinary knowledge effort: the company knowledge system had to move from an internal service to an external service, from a fully owned subsidiary to a listed company with a very sophisticated governance, from a non-competition environment to a free market approach. The strategic move positioned RAI Way as one of the key players in the consolidation of the broadcasting infrastructure.

Determinants of Direction: Drive-Vision

The diagram presented in Figure 2 derives from the direction factor, previously explained, since the direction in which the company moves within a changing context depends directly on how the knowledge leader leads the process and shares both the vision and the knowledge information that permeates the organization. Therefore, the simultaneous presence of a high level of vision and an execution driven knowledge leader can lead to a situation where a possible crisis is overcome in a changing context.

Figure 2 Knowledge leader approach to a changing environment



The direction of change followed by the company, compared to the one used by the external environment, will depend on the ability to drive it and the ability to create and share a common vision within the organization. If the knowledge leader has a high level of drive and vision, organizational change will follow the external change, with a high probability of success for the enterprise; if, however, the company is moving in the opposite direction, it will risk exiting the market.

Vision (Y axis): is the setting of long-term goals, ideals and expectations, which project the future of the company within the target market (Baum et al., 1998; Cruickshank and Collins, 2012; Hermarij, 2016; Oakland and Tanner, 2007; Ozdem, 2011; Rusly et al., 2012; Varkey and Antonio, 2010). The knowledge leader knows where he wants to go and invests time and resources to make sure that the vision is shared at all levels.

Drive (X axis): style that is put in place by the knowledge leader and that depends on his characteristics (Todnem By, 2005). It is the ability to manage the process (Bailey and Clarke, 2001; Singh, 2008) and the ability to drive the whole organization towards the envisioned future.

The knowledge leader's drive and vision mix, communication of vision and knowledge sharing will determine the different scenarios of the change process outcome.

Frustration: is the situation in which the knowledge leader is not able to create a common vision to be transmitted to the entire organization and has no energy or personal leadership to lead the company. In this situation, frustration is generated within the organization given the absence of an

envisioned future destination and of the leader's energy to get the organization there.

The GM knowledge leaders created a frustration situation by continuing to manage the carmaker as the old times and with a low capability to drive the complex organization somewhere. The company was stuck, was unable to react to the 2009 crisis and entered the bankruptcy process.

Voyeurism: the vision in this case is very strong and has been distributed, but the knowledge leader is not able to support the company in the management of change and in the absorption of the new knowledge, because he believes that it can be handled by others. In this case, the manager is reluctant to share and to make actionable his knowledge related to the future vision.

The RAI case exemplified the voyeurism case when, and after the reorganization and the financial turnaround of the company, a new MD assumed the role and launched the digital knowledge transformation. The vision was coherent with the competitive environment, but the drive was jeopardized by the complexity of the structure and the lack of an entrepreneurial approach.

Egotism: there is the absence of a clearly defined vision associated with a knowledge leader with a strong drive and personal execution capability. Even if he discharges a huge amount of personal energy to drive the company towards the future he envisioned, the organization will not follow, and the knowledge system of the entire organization will not change.

The Chrysler case exemplifies the egotism approach. Chrysler was led by a team of outstanding knowledge leaders assembled with a mix of knowledge from the industry and outside the industry and with a calibrated mix of competences. Unfortunately, the vision of the industry and on the coming competitive environment was completely wrong.

Elation: is when the vision has been clearly defined and disseminated throughout the entire organization and the knowledge leaders know how to manage the journey towards the future, driving the entire organization. Elation is that state of joy and success that results from a manager who has a good vision and the willingness and the capability to create and share knowledge and good management skills.

The Fiat Group Automobile Capital exemplifies the Elation case. Having the vision of creating a JV between a bank and a carmaker was avant-garde and creative, i.e., in more than 80 years nobody had tried a similar approach. The drive necessary to merge the management and strategic differences of the two JV participants was key in creating the success. The JV success proved the competitive advantage of merging the two capabilities, but nobody in the industry had the drive to replicate the 50/50% JV, which to operate, needed many management and knowledge leadership.

Elation is particularly difficult to reach in a high speed changing environment, i.e., the Revolution situation of the previous diagram. When both occur simultaneously, a Rev-Elation moment is achieved where the combination of

drives and optimum vision is operated and diffused at a very high rate of change, leading the organizational change to be constantly tended with continuous nurturing of the knowledge assets of the enterprise.

The RAI Way case exemplifies the Rev-Elation case, because the competitive dynamics dictated an incredibly high timing. On top of the vision necessary to obtain the right strategic decision, the drive to execute the management and knowledge changes were essential.

The above framework has outlined the different organizational reactions to the external changes and the different managerial profiles that determine the change process outcome. In conclusion, the framework suggests that the successful adaptation to the changes that occurred in the external environment is the combination of the manager's vision, ability to steer change in the same direction as the external environment and the competence to acquire and diffuse knowledge in the organization.

7. Concluding remarks

Despite the importance that both knowledge and information have in all organizations, few leadership theories have attempted to understand how leaders can manage those two elements with success to drive the company in a changing environment. Moreover, notwithstanding the amount of studies on organizational knowledge, studies on organizational knowledge management from a leader's perspective are missing in the literature. This paper has tried to fill this relevant gap by analysing the role of the leader in managing knowledge and changes in a dynamic environment. In particular, data gathered from four large companies helped us in developing a conceptual framework to attempt to understand the organizations' reaction to external changes and the role of knowledge leader readiness in managing the change and organizational knowledge.

Through the analysis carried out by the authors, it was possible to identify the characteristics that a manager should have when he is in charge of managing a company. The study showed that a careful analysis of the area in which the change is being made in the external environment can safeguard the endurance of the company over time. The analysed cases have confirmed the following, which has been described by the first diagram: the organizations that have changed in the direction opposite to the change that was taking place in the external environment have failed to maintain their competitive position in the market. In contrast, the companies that understood the exact direction of the environmental change and have involved the top management in all activities (de Almeida et al., 2016) achieved success regardless of the speed of the process. Indeed, the companies that correctly interpreted the direction of change of the external environment were able to drive innovation processes through the creation of an effective management of knowledge, regardless of the incremental speed of their change. The research has also individuated the ideal status of an organization, namely, the revolution in which the organization experiences a radical structural change through the

successful acquisition, integration and communication of knowledge following the trends of the external environment.

The organization's capacity to change depends on a manager's ability to create and communicate a common vision, to participate in the process of change by being willing to share his knowledge and to promote the organization's development together with his personal development.

The research also confirmed the need, as previously investigated by other studies (Schiemann, 1992; Kotter 1995; Kotter, 2009; Ewenstein et al., 2015), for the implementation of a change to have a clear vision, an excellent level of communication, and good knowledge sharing, as well as the involvement of people at all levels (Isern and Pung, 2007); these factors are essential to avoid misalignment of goals within the organization (Taylor, 1999).

This study has several limitations. First, it has designed a theoretical framework through the analysis of case studies. More empirical studies are needed to investigate and consolidate the theoretical framework, which could be used in practice to determine the optimal managerial characteristics and behaviour for the successful implementation of an organizational change process. Second, the findings do not offer any evidence regarding the company's success driven by knowledge leader decisions and approaches to knowledge management. Future studies could address this issue through quantitative methods. Third, an empirical and qualitative study could be developed to investigate how small- to medium-sized enterprises react to frequent environmental changes.

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