



HOW KNOWLEDGE CREATION AND KNOWLEDGE SHARING ENABLE INNOVATION CAPABILITY: PROPOSAL OF A CONCEPTUAL MODEL.

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ABSTRACT

In light of globalization, the invention and innovation processes have known a massive change in the last decade. Industries and businesses are coping with the new environment changing the personal and professional habits of individuals, groups, and organizations; Consequently, leading the global market revolution.

In this paper, we are studying one of the fundamental antecedents of innovation that is knowledge management processes. The purpose is to demonstrate how the proper implementation and use of the construct can ensure the capability to innovate in Chinese high-technological industries; Likewise, highlighting the impact of the individual's behavioral factors on promoting this linkage.

The investigation took the case of the implementation of 5G technologies services to Moroccan leading telecom operators while conducting semi-structured interviews supported by open-ended questions with employees currently working on the project. The empirical data collected has endured the grounded theory method to analyze the text to be able to extract an attribute for the conceptual model of this study. After analyzing the results, we were able to explore the relationship between knowledge creation, knowledge sharing processes, and innovation capability to answer the question of what factors of KM processes enables innovation capability. Besides pre-existent behavioral factors from previous studies like motivation, trust, learning, collaboration, leadership, will to help each other, and trust in own abilities. The findings revealed more factors that enable the capability to innovate in technological firms, listing recognition and work appreciation, openness to change, communication skills, and the feel of belonging. This paper is offering a conceptual model that shows the linkage between knowledge creation and knowledge sharing processes and the capability to innovate but mainly how this relationship functions in the appearance of behavioral factors presented by individuals.

1. INTRODUCTION

In high-tech industries, there is a strong belief that firms that possess a higher technological and innovative capability have more competitiveness than those without this capacity. Considering the importance of innovation, research from a variety of disciplines has looked for answers to the critical question “what can be done to improve innovation?”¹. Knowing that sustainable development in terms of innovation is nowadays a big challenge that faces the technological industry. Another valuable concept in the literature is Knowledge, and it has been regarded, as a crucial resource in firms that give rise to competitive advantages in today’s business environment.² Current literature is rich with multiple definitions of KM. For this research, we adopted one that is related to this paper, stating that businesses that possess knowledge within the organization and know how to use it to improve the ability to learn from competitors are most likely to benefit from the outcomes.³ The focus is on a firm’s ability to create, transfer, and use knowledge to build up sustainable competitive advantages. Generally, knowledge management processes are knowledge creation, knowledge sharing, knowledge acquisition, and knowledge documentation. China is a fast-growing economy and a major global player that possesses a powerful position in the worldwide market⁴ puts high-priority efforts to become a more knowledge base economy and society that indicated the importance of knowledge management⁵. Many significant research studies have separately analyzed factors that are crucial for the implementation of KM system but, few have linked the factors of knowledge management processes of creation and sharing to the innovation capability from an individual level. The context of the study is to investigate the case of a Chinese high tech company, to provide a path that explains through which factors of key knowledge management processes are influencing the capability to innovate.

2. LITERATURE REVIEW

2.1. Knowledge Sharing Process

Many studies have reported that aspects of knowledge management are linked to innovation. However, few have explicitly examined the relationship between the two constructs. While doing an extensive search in the literature it appeared that effective transfer and sharing for both tacit and explicit knowledge is an important KM process in enhancing organizational performance and innovativeness⁶. Evidence proving that knowledge acquisition has a positive effect on innovation⁷.

Knowledge sharing creates opportunities to maximize an organization's ability to meet those needs and generates solutions and efficiencies that provide a business with a competitive advantage. Knowledge sharing can be defined as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization. Knowledge sharing comprises a set of shared understandings related to providing the employees' access to relevant information and building and using knowledge within the organization. Moreover, knowledge sharing occurs at the individual and organizational levels. For individual employees, knowledge sharing is talking to colleagues to help them get something done better, more quickly, and more efficiently. Despite the challenge of sharing tacit knowledge, it is the most significant not only in terms of a category but also in knowledge processes when working on a project. The efficiency here is related to how people can gain knowledge at a small cost of time and money sharing tacit knowledge with others. This action is constantly to occur to help the organization benefit from KM. With the help of technology and how it made the sharing process accessible to anyone, it is then a definite way for organizations to overcome the hard times⁸. Another treated aspect in the literature is the motivation behind employees sharing knowledge mentioned that more people are willing to share knowledge for an Individual benefit such as self-interest, personal gain, etc.

2.2. Knowledge creation process

Generally, knowledge sharing focuses on the internal firm’s interaction while knowledge acquisition refers to the knowledge that is available outside the firm. Various external sources (suppliers, client-consultant, competitors, and government bodies) are an essential source of knowledge to the organization. The literature suggests that

organization that are successful in acquiring external knowledge, possess richer and more varied knowledge basis and consequently are more innovative considering what stimulates innovation is the diversity of viewpoints inside the organization by the richness of its knowledge base⁹.

The pertinent theory of knowledge creation was presented by Nonaka and Takeuchi¹⁰, they declared that if Japanese companies are successful today, it is due to the fruitful implementation of knowledge creation into their business strategy. By analyzing how these companies innovate and their ability to create new knowledge, they created a SECI model that associates tacit and explicit knowledge through some interactions between the different levels (individual, groups, and organizational). The model includes four modes of knowledge creation: socialization, externalization, combination, and internalization. To understand well these four concepts and their interconnection a study introduced a cycle of tacit knowledge that is transmitted from a person to another under the concept of socialization, and by organizing and giving a form to this knowledge makes it an explicit, it is then an externalization. The combination of these two types of knowledge designs the concept of internalization, making a sort of a cycle to boost more knowledge in the organizations.¹¹

2.3. Technological Innovation

Innovation has shown its variability over time and space. Over time, the centers of innovation have shifted from one sector, region, and country to another. The classic concept of innovation centered on technological innovation remains Schumpeter's "The opening of new domestic or foreign markets with organizational development from craft shops to factories. It illustrates a process of industrial mutation that incessantly revolutionizes the economic structure from within, which is destroying the old structures and creating a new one".¹² This concept with a particular focus on the manufacturing sector and emphasizes the research and development (R&D) entity, is present in the categories established by manuals for statistical measurement of innovation in the business sector accompanied by non-technological forms of innovation.¹³

The first and second editions of the Oslo Manual¹⁴ used the technological product and process (TPP) definition of innovation with a focus on the technological development of new products and new production techniques by firms. The latest edition of the Oslo Manual recognized the importance of innovation in less R&D-intensive industries, such as services and low-technology manufacturing, expanding the definition to include organizational and marketing innovations (non-technological innovations). The same edition found that innovation is the implementation of a new or significantly improved product (good/service), process, marketing method, or an organizational method in business practices, workplace organization, or external relations". This variety of innovation types form the different ways by which firms invent and innovate to continually improve their performance, increase the economic outcome, and ultimately contribute to knowledge accumulation.

2.4. Innovation capability and technological capability

With the major technological transformation and product competitiveness in the IT environment, it is likely to reflect on the consumer need and preference. Consequently, firms are aware of the importance of accelerating their capability to innovate and create sustainable opportunities and the market. Chinese firms and more than others are making enormous innovative inventions day by day that contributes to a viable economic growth to the country.

When it comes to the identification of innovation sources, researches are still growing in that area and one of the advanced findings is that technological capability is a strong antecedent of innovation.¹⁵ Despite the relevant relationship between technological capability and innovation, it is insufficient to create innovation, thus, forming innovation capability.¹⁶

Technological capability is a firm's ability to design and develop a new process or product and upgrade knowledge and skills about the physical environment in a unique way, along with the proper use of knowledge management by transforming the knowledge into instructions and designs to create and attend the desired performance.¹⁷ Furthermore, technological capability comprises the body of practical and theoretical knowledge, procedures, experience, methods, and physical equipment and devices.¹⁸ Knowledge being a facet of technological capability by allowing a firm to identify, acquire, and apply new external and internal knowledge to develop operational competencies, which leads to the attainment of superior performance. Using technological capability, a firm creates and delivers either new products/services or enhances an existing product in a better and efficient way that satisfies

the customer needs, thus enhances the overall success of a firm's new product development and performance.¹⁷ One of the first scholars to address the importance of innovation capability was Drucker¹⁹, he declared that a firm has to be innovative to survive in a volatile environment. Innovation capabilities are critical to achieving a superior innovation performance, as markets are characterized by short product life cycle and a high rate of new product innovation. A firm with strong innovation capability will enjoy a high innovation performance. He then added that a firm with high innovation capability employs learning by Savoir-Faire effect, which makes it very difficult for competitors to buy this expertise in the market and make it extremely difficult for firms to imitate. Among the management objectives proposed by this approach, the management of a firm's knowledge resource with respect to a firm's innovativeness has increasingly attracted attention over the last decades.²⁰ The relationship between knowledge management and innovation capability showed that knowledge-sharing behaviors contribute to the generation of various organizational capabilities such as innovation, which is vital to a firm's performance.²¹

3. METHODOLOGY

3.1. Research design

The strategy behind building theory revolves around case studies, and formal scholars have always considered the use of case studies to build theory as one of the most convenient forms to analyze a phenomenon, person, place, and event, Etc. The reason behind the choice is to examine the phenomenon in a specific environment more likely to propose consistent empirical evidence.

The followed methodology in this paper is a qualitative approach to conduct an empirical study. The main reason behind this choice is, first, the lack of empirical studies that examine the relationship between the two phenomena. Existing studies offer a limited detailed analysis of the component of both knowledge management processes and innovation capability, thus, exploring the enablers factors of innovation capability using KM sharing and creation.

To answer the questions of this research, we selected a single case study of a big-scale tech project from a highly recognized Chinese company. Considering the complexity of this project, it mattered to go for one sub-project supported by the Chinese firm.

Interviews are an efficient way to gather rich, empirical data, especially when the phenomenon of interest is highly episodic and infrequent. The challenge of interview data is best to mitigate by data collection approaches that limit bias. Key approaches are using informants from different hierarchical levels, functional areas, groups, and geographies, as well as actors from other organizations and outside observers.²²

3.2. The case

It is absurd to bring the name of Huawei and not to mention innovation. From its earlier years, the company made sure to deliver solutions that offer value of non-stop innovation committed to continuous development and production of the process to provide a valuable and reliable solution to its clients and ensure the sustainability of its brand on the market. Huawei Company leads the development of new technologies thanks to the strategy that relies on the innovation of all various types (product innovation, process innovation, and brand innovation). The more trust, openness, and collaboration the company engages with the different stakeholders, the more opportunities for growth and success it brings to the table.

As a leader of the ICT industry, Huawei was the fastest to develop the 5G technologies after years of researches. considering it the most competitive product in today's tech, Huawei is making sure to deliver a product with an uncomplicated network architecture that will facilitate operations and maintenance, not to forget the security aspect to ensure a strong resilience conform with the international regulations.²³

This paper examines the case of the "Huawei 5G Technologies" project, which is believed to be the next generation of mobile internet connectivity, offering faster speeds and more reliable connections on smartphones and other devices than ever before. At the very beginning of the project, Mr. Ren Zhengfei, Founder, President, and CEO of Huawei Technologies, expressed the company's ambitions in the Arab world and the Middle East as part of the launch of the new 5G technology. Huawei Technologies aims to supply 5G technologies and other advanced technologies to countries in the Middle East and North Africa to bridge the digital divide and advance in cultural, educational, and industrial matters.²⁴

The main reason behind choosing a Chinese company, particularly Huawei, is that the company has been the first to develop this large-scale project before it enters into fierce competition in the tech market. And the reason behind choosing the case study of Huawei 5G technology is that the opportunity to exploit knowledge management application into producing innovation in a project that involved an expanded base of humans and interactions between them before the deliverance of the projects as stated above. With that, it will be accurate to investigate

the phenomena of interest in the selected context.

3.3. Data collection

The Author used semi-structured interviews to collect data for this study. To gather focused qualitative textual data, we opted for open-ended questions that focus on a structured ethnographic survey. Hence, to be able to explore the relationship between the two concepts, and other possible factors depending on opinions and perceptions of the interviewees that emphasize this relationship from their angle of vision, and based on their personal experiences, which is hard to investigate through a formatted questionnaire.

The interviews took place in Rabat city, Morocco, with a small group of Huawei 5G project members, holding different positions on the exact project and from different backgrounds. The individuals chosen were mainly concerned with the “5G technologies” to be able to discuss the inputs of this project. Other interviewees were selected based on their interaction with the knowledge management system of the organization to be able to evaluate the effectiveness of KMS based on their practical experiences. The interviews are to follow the same protocol, and aside from general questions such as the interviewees introducing their role in the project and their knowledge on KM, the questions were divided into three categories, including knowledge management, innovation, and individual factors. Contacting interviewees via emails was considered for unclear information collected during interviews needs to be clarified.

After recording the interviews, we generate transcripts to conduct data analysis. Furthermore, to ensure the transparency of the transferred information, it was significant to confirm with the informants after scripting the vocal records to text-based that then classified per informant and summarized to be traceable based on the category defined.

Based on the pre-defined categories by the researcher, it was possible to extract useful information to answer the research questions, and data coding took the form of a table that presents the information from the three informants, classified by interview’s questions code. Later, we condensate the informant answers to abstract inductive code of each answer that helps defining the existence of different answers or same answers with different interpretations. The code then allowed us to generate sub-categories and categories to be able to build the theory regarding this paper using relevant information from interviews and other sources.

3.4. Data analysis

The process of analyzing data began with preparing transcripts for each interview conducted, making sure to summarize it into readable and easy to trace paragraphs or phrases.

After reading through the transcripts and taking notes to start coding the data using descriptive coding to first sum up what has been said in the interviews, taking into consideration that and overall, interviewees were asked the same questions that their answers may fall into the same category. Finally, considering the use of the grounded theory method, categories and sub-categories were identified following the topic under discussion. Overlapped sub-categories were then merged into the same category. As a result, the categories were serving the aim of our study by presenting the factors that affect innovation capability in the 5G project.

Below are the findings from the data collected to support the study of this paper:

interviewees	M. X	M. Y	M. Z
Inductive code	The benefit of KM system application in managing Huawei projects	Huawei’s succeeded the implementation of KM strategy with the help of km system	Importance of training when a new knowledge is introduced to the organization
Sub-Category	Knowledge management system	Knowledge management system	learning culture
Category	KM system	KM system	KC process factors

interviewees	M. X	M. Y	M. Z
Inductive code	KM is linked to innovation capability	<ul style="list-style-type: none"> Huawei has a platform that interface its employee's knowledge and R&D researches Direct relation between KM and IC 	N/A
Sub-Category	KM processes effect IC	KM processes affect IC	N/A
Category	KM system	KM system	
Inductive code	Individual factors affect innovation capability in a project by work appreciation and collaboration.	<ul style="list-style-type: none"> Individual factors can affect positively/negatively innovation rate in projects Relationship between R&D and KM 	Individual behaviour can impact project success both ways.
Sub-Category	<ul style="list-style-type: none"> Recognition and Work appreciation Collaboration Impact of the factors on innovation capability 	<ul style="list-style-type: none"> IF affect IC R&D & KM effect on IC 	Trust link to IC
Category	KC process factors effect on IC	External factors	KC process factors effect on IC
Inductive code	KC has a direct relationship with innovation capability	N/A	N/A
Sub-Category	KC affect innovation capability	N/A	N/A
Category	KM system		
Inductive code	People can participate in creating knowledge by being open to new knowledge and support it	Openness to change increase the capability to innovate	Respect and cultural exchanges between project team helps create a good climate
Sub-Category	Openness to change link to IC	Openness to change link to IC	Openness to change link to IC
Category	KC process factors effect on IC	KC process factors effect on IC	KC process factors effect on IC
Inductive code	The challenge of managing cross cultural projects	It is the project manager's or project leader's duty to insure the ongoing of the project work in the good possible way	N/A

interviewees	M. X	M. Y	M. Z
Sub-Category	Leadership	Leadership	N/A
Category	KC process factors effect on IC	KC process factors effect on IC	
Inductive code	Shared tasks acceptance	Shared tasks between project team members during the run of a project	N/A
Sub-Category	Collaboration	Collaboration	N/A
Category	KC process factors effect on IC	KC process factors effect on IC	
Inductive code	Communication as a factor of sharing tacit knowledge.	Sharing tacit knowledge with other project team members helps enables innovation	Acceptance of sharing with other employees
Sub-Category	Communication skills	trust	Trust
Category	KS process factors effect on IC	KC & KS relationship	KC & KS relationship
Inductive code	Employees willing to help other employees	Seek help from other employees	using the existing base of knowledge within the firm
Sub-Category	Trust	<ul style="list-style-type: none"> • Trust • Learning culture 	trust
Category	KC process factors effect on IC	KC process factors effect on IC	KC process factors effect on IC
Inductive code	Understanding the importance of trainings to grow its personal knowledge	Acceptance of trainings	Personal skills development as one of Huawei's strategies
Sub-Category	Learning culture	Learning culture	Learning culture
Category	KC process factors effect on IC	KC process factors effect on IC	KC process factors effect on IC
Inductive code	Motivational programs drives employees to be more open with each other	Appraisal and appreciation of work also motivational program as a sort of rewards	Recognition endorse innovation capabilities

interviewees	M. X	M. Y	M. Z
Sub-Category	Motivation	<ul style="list-style-type: none"> Recognition and work appreciation motivation 	<ul style="list-style-type: none"> Motivation Recognition and work appreciation
Category	KC process factors effect on IC	KC process factors effect on IC	KC process factors effect on IC
Inductive code	Trust, appraisal and work appreciations are all individual factors to enhance innovation capabilities in in projects	R&D is a crucial factor for increasing IC hence individual factors	Acceptance and welcoming the new technology
Sub-Category	<ul style="list-style-type: none"> Trust Leadership 	<ul style="list-style-type: none"> R&D IF enables IC 	Openness to change
Category	KC process factors effect on IC	External factors	KC process factors effect on IC
Inductive code	trust and learning culture within internal and external actors of a project are factors to boost innovation capabilities	Openness to change to new knowledge is a factor that enables innovation capability in the implementation of 5G technology project in Moroccan operator	Confidence in abilities and personal skills to share knowledge
Sub-Category	Learning culture link to IC	Openness to change link to IC	Confidence in own abilities
Category	KC process factors effect on IC	KC process factors effect on IC	KS process factors effect on IC
Inductive code	Knowledge sharing is more likely to impact positively innovation capability then KC	Sharing knowledge affect the deliverance of a project	N/A
Sub-Category	KC affect positively IC	Enjoyment in helping each-other	N/A
Category	KC & KS relationship	KS process factors effect on IC	
Inductive code	People who enjoy helping impact innovation capability	Enjoying helping others is appreciated behaviour of share knowledge with other employees	Acceptance to share and help other employees
Sub-Category	Enjoyment in helping others	Enjoyment in helping others	Willing to helping others
Category	KS process factors effect on IC	KS process factors effect on IC	KS process factors effect on IC
Inductive	Employees with confidence in their	Confidence in its own abilities and skills	Confidence in abilities and personal

interviewees	M. X	M. Y	M. Z
code	abilities and skills to execute work can affect positively or negatively the innovation capability of a project	endorse motivation and competitiveness	skills to share knowledge
Sub-Category	Knowledge self-efficacy	<ul style="list-style-type: none"> • Knowledge of self-efficacy • Confidence in own ability 	Confidence in own abilities
Category	KS process factors effect on IC	KS process factors effect on IC	KS process factors effect on IC
Inductive code	employees willing to helping other employees and have high confidence in their abilities	N/A	N/A
Sub-Category	<ul style="list-style-type: none"> • willing to help others • Knowledge of self-efficacy 	N/A	N/A
Category	KS process factors effect on IC		
Inductive code	KS process and KC process link	These two factors can affect IC in different terms and levels	Serving the project output when sharing knowledge with other colleagues
Sub-Category	KS affect KC	<ul style="list-style-type: none"> • Enjoyment in helping other • Confidence in own ability 	Feeling of belonging
Category	KC & KS relationship	KS process factors effect on IC	KS process factors effect on IC
Inductive code	Creation of a an existing knowledge base and use it to enhance knowledge capability in projects	Confidence is a behavior factors that helps enhancing innovation capability in a project	Sharing knowledge through behavioural factors to increase the capability to innovate
Sub-Category	Knowledge documentation	Confidence in own abilities	<ul style="list-style-type: none"> • Confidence in own abilities • Feeling of belonging
Category	KM system	KS process factors effect on IC	KS process factors effect on IC
Additional data source according to different domain of expertise			
Inductive code	N/A	Cross cultural projects are challenging	N/A
Sub-	N/A	Communication skills	N/A

interviewees	M. X	M. Y	M. Z
Category			
Category		KS process factors effect on IC	
Inductive code	N/A	Quality of the information	N/A
Sub-Category	N/A	Motivation	N/A
Category		KC process factors effect on IC	
Inductive code	N/A	N/A	Training as booster for project team to innovate
Sub-Category	N/A	N/A	Learning culture
Category			KC process factors effect on IC
Inductive code	N/A	N/A	Employees participate in creating knowledge thanks to Huawei's strategy
Sub-Category	N/A	N/A	Leadership
Category			KC process factors effect on IC
Inductive code	N/A	N/A	Working in cross cultural project helps improve personal skills
Sub-Category	N/A	N/A	Learning culture
Category			KC process factors effect on IC

Findings of collected data from the interviews conducted with the project team members.

4. RESULTS

To be able to explore the relationship between the knowledge sharing process, the knowledge creation process, and the capability to innovate, for this paper we worked on a case study from Huawei 5G projects, to permit the researcher to extract the individual factors that interconnect this relationship. The conducted research used

grounded theory, documents, interviews, and observations were the source of data to present the finding discussed in the previous section of this chapter. While doing the literature review, we were able to generate a model that demonstrates the interactions between the pheromone and some existing factors in the literature. The author anticipated that, by getting accurate data, this study is to offer an opportunity to explore other individual factors and new interconnections that strengthen the model. Hence, an initial phase to further studies that aim to explore more factors of knowledge management processes from different levels. The interviewees were selected and contacted, as they are legibly suitable to provide relatable result considering their positions in the implementation of Huawei 5G technology for the three Moroccan telecom operators project.

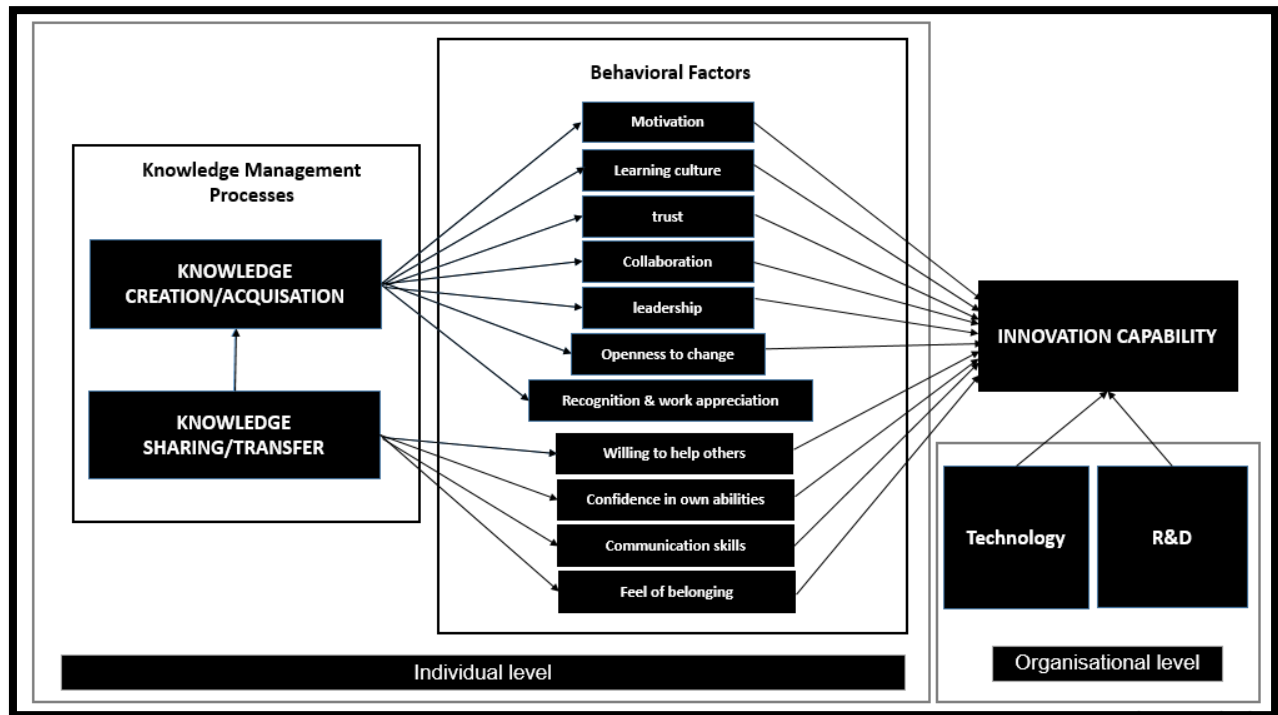
Starting with the knowledge creation process, we were able to define the possible behavioral factors that the project team must possess and affect the capability to innovate. Leadership did not show a strong connection, yet it is important for at least the project leader to provide. Collaboration, on the other hand, is of a high value together with trust as they both have a connection to allowing the success of the implementation of new knowledge with the possibility to be more creative. Learning culture proved to be performant on both the organizational and individual levels, while the ability to create and support the new knowledge comes with acceptance first. Trust, according to a large base of researches, is considered a factor of both processes taking into account its value as one of the determinants of knowledge management. Interviewees were able to suggest two more factors, recognition & work appreciation together with motivation, create more possibilities to innovate in high scale projects. The last one was the openness to change, like learning culture it helps provide the results regardless of the situation.

Similar to knowledge creation factors, the results for knowledge sharing process factors were significant as they provided the author with the needed answers to this research. The two factors proposed while examining the relationship between knowledge sharing and innovation capability were the enjoyment of helping others and knowledge self-efficacy, and while conducting the interviews, we received underlapped results that state both factors with two other possible factors that can show more impact to serve the aim of this part. The enjoyment of helping others was replaced by willing to help others as the rate of occurrence the joy of sharing knowledge with others is barely possible. However, if it occurs, it will prove its efficiency more than just a willingness to help other people. Confidence, on the other hand, can take over the knowledge of own abilities and capabilities as the appearance of the confidence factor in literature has left a few to doubt the strong connection with knowledge sharing. Finally yet importantly, parallel to knowledge creation factors, the interviewer was able to collect two additional individual factors from data to enhance the connection between the phenomenon and the conducted study. The communication skills factor is, without a doubt, an antecedent of the capability to innovate as it proved its beneficial role to transfer and share knowledge among individual or group level. As a result, it creates a wide knowledge base for the firm to restore and reuse again. Although the author had few data sources to emphasize the feel of belonging factor, still, and based on the literature, we were able to identify it as a possible individual factor alongside with motivation to bring more opportunities to share knowledge with anyone in need among the different levels.

The meeting started with the three team-members and the observer who was able to notice multiple behavioral aspects from the different interactions that took place between the members that were related to the subject. As it was teamwork, we were able to notice that the group had a high sense of collaboration and will to help each other. It led the observer to witness that the team manager plays an important role in encouraging such behavior among the team members, which gives credit to his leadership. Everyone has shown a full dedication to deliver the work and meet the meeting's objectives, and with the ongoing work, all participants were open to suggestions and remarks from other colleagues that confirm their openness to learning and communication skills. Results from document analysis have allowed the researcher to confirm the findings from interviews and to explore additional possible factors that interact between knowledge management and innovation capability. From openness to change, trustworthiness, learning culture, and leadership, these factors are of a strong and varied existence in the values of Huawei Company that is transmitted to employees, customers, and stakeholders. As a result, we were able to validate and reinforce the conceptual model that demonstrates how knowledge management creation and

sharing processes affect the capability to innovate, and what possible factors from the individual-level play the role of enablers in tech-projects.

Below, the summary result of the study offering a model that presents the individual factors that enable the capability to innovate when creating or sharing knowledge in technological projects.



Conceptual model resulting the behavioral factors findings of KC and KS processes and their relationship with IC.

5. DISCUSSION

The objective of this section is to explain the results and interpret the evidence that justifies our theory of interest. The study was conducted to explore the relationship between knowledge creation and knowledge sharing processes, and the capability to innovate, using a single case of IT project from high scale company leading the industry, to be able to get accurate results that support the theory built around the crucial role of human capital affecting the outcomes of innovation. To better understand the phenomenon of study, it was necessary to execute in-depth research to extract relevant documents that will allow us to collect data about what are the possible behavioral factors that have an impact on innovation of all types. Notable researches discussed the relationship between human resources and innovation. However, few offered a detailed analysis of how this relationship functions. The researcher chose to conduct interviews in order to collect rich and concrete data to be able to explore and examine the theory in an existing environment and in real-time to provide us with the necessary evidence that states the rightfulness of the results. We were able to discover how the phenomenon performs in IT industries, thanks to the case of the 5g technologies project. Proving the human behavioral factors have a direct impact on increasing or decreasing the capability to innovate some more than others. For knowledge creation factors, the more the project team members work in collaboration, the more they learn. Learning culture is transmitted to the group through organizational culture, and it is the high authority duty to support the employees to learn new technologies introduced in the light of programs, hence, only possible through leadership strategy and attitude. Trust, as presented by scholars to be an essential enabler of innovation capability being a factor of

knowledge creation. However, the results have shown it as a mutual factor that could occur both when creating or sharing knowledge. The last explored factor of knowledge creation was mentioned in different studies is motivation. Results were able to highlight the impact of a motivated project team to create value while delivering relevant outcomes. Moreover, it recommended that the manager is the one in charge to keep the level of motivation maintained by, for example holding events and programs related to the project or the entity the employees belongs to, awarding team members for their excellence, and recognize their performance.

The second part of the results was to be able to cite the behavioral factors of knowledge sharing. Thanks to literature reviews and data analysis, we were able to define four of the knowledge sharing individual's factors that prove a positive influence on innovation capability. In order to share knowledge, people should have the will to help others despite competitively among the team members, the more you help other when they ask for and conforming to the availability and accessibility to the information to be shared, next it was the communication skills of individuals that permit the shared knowledge to be useful to enhance innovation. People that have confidence in their abilities proven to be more innovative and develop a great sense of creation. They are not ashamed of sharing their thoughts and ideas with other group members to help extend the base of shared knowledge and allow exploring new ideas to be implemented in future projects. Least but not last, we have discovered a factor that was briefly introduced in the literature but highly emphasized in the collected data that provided us with a behavioral aspect of people who feel appreciated by their leaders. These people could participate in delivering excellent results for every task they are required to do as they believe in the ideology of the firm they are representing, and whatever work they are doing speaks for the organization as a whole and not only as an individual work. After distinguishing these individual factors, the author was able to conclude that the link between knowledge management processes and innovation capability to prove its efficacy and efficiency by human behavioral factors as factors from groups and organizations. The significance of relying on individuals is for what it provides to firms to get outstanding results for each step of the project no matter how complicated it is such as the 5G technologies project.

6. CONCLUSION

Nowadays and taking into account the major changes that face the world on a daily basis in term of technological innovation and the impact on the global environment, it is fundamental to go deep and examine the role that humans plays acting within a group but mainly as individuals in leading firms of technological industry to ensure the ongoing process of innovation under the global market change and fierce competitiveness worldwide. In this paper, we wanted to acknowledge the achievement of one Chinese firm leading the industry of information communication technology by adopting a single case from one of their game-changing projects. The study took the case of Moroccan carriers who have signed a contract with Huawei to deploy the 5G technology to be able to examine the relationship between knowledge management processes and innovation capability and how individual behaviors interact in such a project to ensure its success. We opted for semi-structured interviews to collect the necessary data and extract the individual factors that could influence the crossing of knowledge creation and knowledge sharing to increase the innovation capability in such projects. Besides KC factors and KS factors, we investigated additional information to ensure a well understanding of the current status, and strategy of the project adopted by Huawei. Information about the knowledge management system, external factors like R&D and technology, and least the link between knowledge creation and knowledge sharing. The finding resulted that one of the company's crucial business strategy is the management of knowledge, both explicit but mainly tacit. Huawei is one of the few Chinese companies that had succeeded in the implementation of the KM system, proving its sustainability in the global market despite the challenges and competitively with western firms generally American firms. Prior to conducting the interviews, we collected an ensemble of individual factors that permit the sustainability of knowledge management processes hence enabling innovation capability. Knowledge creation factors included motivation, learning, trust, collaboration, and leadership. Data analysis results permitted to explore more factors, mentioning recognition, work appreciation, and openness to change. Similarly, we were able to extract two additional factors: communication skills, and the feel of belonging. Findings of this study have suggested a more specific behavioral treat proposing willingness instead of enjoying helping each other and confidence of own abilities instead of knowledge of self-efficacy. Therefore, looking at previous studies, knowledge management

processes are linked one to another yet, we were able to demonstrate the relationship between the factors presented in the results and that a single process does not prove its efficiency and efficacy without the other. To conclude, the result permitted to demonstrate not only the link between the KC and KS processes and innovation capability in the 5G technologies project but to examine the factors that fuel this relationship from the individual level. It has presented a total of seven factors for the knowledge creation process and four factors for the knowledge sharing process. The results can be adopted by other firms from the tech industry to consider the factors in the KM strategy hence, further research to explore other potential factors from the same or different levels.

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