THE ROLE OF CULTURE IN MANAGING OPEN INNOVATION PROJECTS WITHIN REGIONAL CLUSTERS

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Abstract: The purpose of this research paper is to investigate the cultural barriers to open innovation projects within Moroccan clusters. Based on a qualitative approach, 22 semi-structured interviews with the representatives of four categories of open innovation project members within the three Moroccan clusters were conducted. The results demonstrate how certain aspects of national culture influence partners' behaviour in open innovation projects within innovation clusters, and what dimensions of the organisational culture of the members involved in these projects should be modified to match better with an open innovation paradigm. The findings confirm that only organizations with strong dynamic capabilities will be able to take full advantage of open innovation practices and that one of the three high-level dynamic capabilities is transformation capability that is about transforming organizational culture by promoting the open innovation culture.

Keywords: clusters, dynamic capabilities, open innovation, organizational culture, project management, transformation capabilities.

1. INTRODUCTION

The concept of open innovation was introduced by Henry Chesbrough in 2003. Over the past 18 years, many researchers have analyzed it from different perspectives. Nevertheless, the scientific community disputes that the human dimension of an open innovation is still under-studied and this field of research is highlighted as a promising area (Elmquist et al., 2009; Hossain, & Anees-ur-Rehman, 2016; Lopes, & de Carvalho, 2018; Randhawa et al., 2016; Schroll, & Mild, 2012; Vrande et al., 2010).

Besides, it is denoted in the literature that culture is an important explanatory variable of human and business behaviour and one of the main reasons for the failure of open innovation implementation (Lichtenthaler, 2011; Naqshbandi et al., 2015). In this context, our research question is as follows: what cultural dimensions of organizations should be transformed for the success of open innovation projects realization within Moroccan regional clusters?

This paper contains three principal points. First, we present a literature review on the key concepts related to our research question. Then, we describe the methodology of our research. Finally, we develop and discuss the findings of our study.

2. THEORETICAL FRAMEWORK

The present section presents the concepts of an open innovation and of a regional cluster, while highlighting the scientific link between these two theoretical fields. The second one states the literature review based on culture, including organizational culture with its two subcultures, an innovation culture and open innovation culture, as well as Moroccan

national culture that influences significantly the organizational culture.

2.1. Open innovation within the innovation cluster

Theories of an open innovation suggest that innovations are not always inspired and developed entirely within a single company and that the production of innovative results is facilitated by greater openness to external sources of knowledge (Elmquist et al., 2009). In this paper, the most recent definition of Henry Chesbrough was adopted. He stated that "open innovation is a distributed innovation process that relies on purposively managed knowledge flows across organizational boundaries, using pecuniary and non pecuniary mechanisms in line with the organization's business model to guide and motivate knowledge sharing" (Chesbrough, 2017, p. 35).

While cluster is defined as "a process of firms and other actors co-locating within a concentrated geographical area, cooperating around a certain functional niche, and establishing close linkages and working alliances to improve their collective competitiveness" (Andersson et al., 2004, p. 7). The examination of open innovation and regional clusters revealed some similarities and complementarities between the two concepts (see Figure 1). These include collaboration between companies and other institutions and, thus, the presence of inter-organizational network effects; knowledge flows across organizational boundaries and their externalities, as well as positive impact of geographic proximity (Cooke, 2005; Huang, &

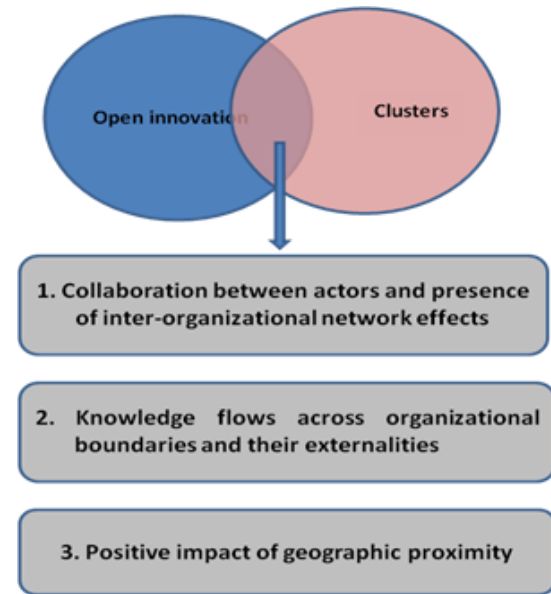Rice, 2013; Simard, & West, 2006; Vanhaverbeke, 2006).

Figure 1: Similarities between open innovation and clusters
Source: Developed by authors (based on literature review)

2.2. Culture matters: an appropriate resource for the management of open innovation

The definition of organizational culture mostly accepted by the scientific community is as follows: "a set of values, beliefs, assumptions and symbols that is shared by all members and that directs their decisions and organizational behaviours" (Schein, 1985). According to Naqshbandi et al. (2015), organizational culture can promote or delay the open innovation process it depends on whether an organization's culture is favourable or unfavourable to such a process.
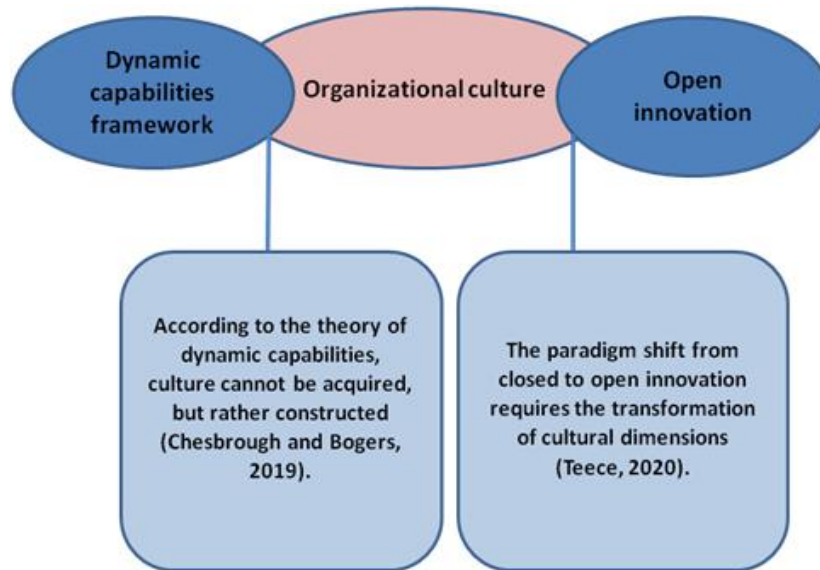
Figure 2: Place of organizational culture in open innovation projects according to the dynamic
capabilities theory
Source: Developed by authors (based on literature review)

The Figure 2 visualises the links between organisational culture and dynamic capabilities theory, on the one hand, and between organisational culture and open innovation, on the other. According to the theory of dynamic capabilities (Teece et al., 1997), culture cannot be acquired, rather it must be constructed. In an open innovation literature, organizational culture is often flagged as a key inhibiting force and one of the greatest challenges when companies are moving toward open innovation principles (Cui et al., 2018; Lichtenthaler, 2011; Van de Vrande et al., 2009). To successfully transition from closed to open innovation, companies need dynamic capabilities to adapt its intangible resource "innovation culture" to its innovation strategy.
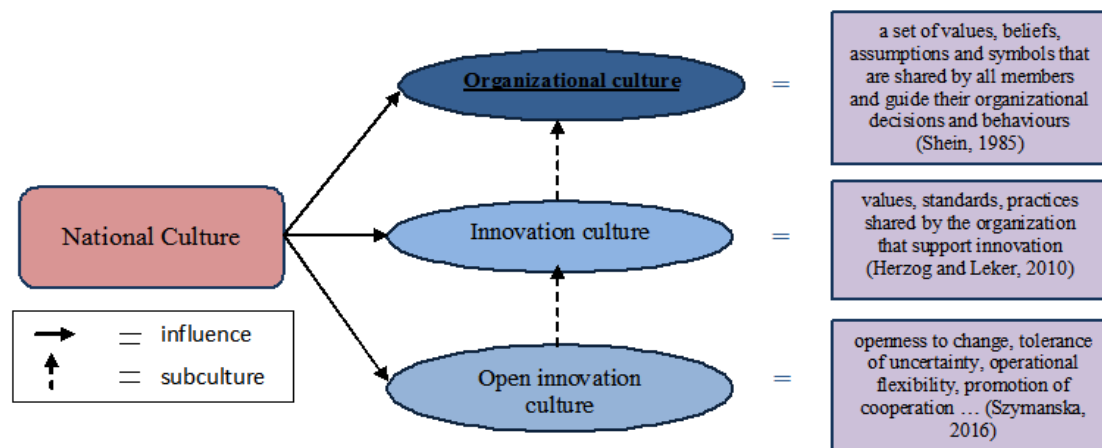

Figure 3: Research framework of Culture
Source: Developed by authors (based on literature review)

Figure 3 visualises the research framework of culture. Notably, two important subcultures of organizational culture are innovation culture and open innovation culture. Literature refers to *innovation culture* as the internal environment of an enterprise or business unit (values, norms, practices) that supports openness to new ideas, tolerates failures, promotes learning, favours constructive opposition and encourages risk-taking (Herzog, & Leker, 2010). Concerning *open innovation culture*, "an open organizational culture is characterized by the so-called open space, which refers to the willingness to change, high

tolerance of uncertainty and flexibility of operations, the emphasis on development, commitment and dynamism of all employees, as well as being integrated into the company's objectives, pro-innovative and open to cooperate with the environment" (Szymańska, 2016).

The main objective of an open innovation is the creation of new knowledge through the collaboration of different partners. Open innovation is therefore based on how individuals and groups communicate, exchange ideas and learn from each other. As these individuals and organizations are a part of society, they reflect their national culture in their mental thinking, practices and values (Dabrowska, & Savitskaya, 2014; Javidan et al., 2005).
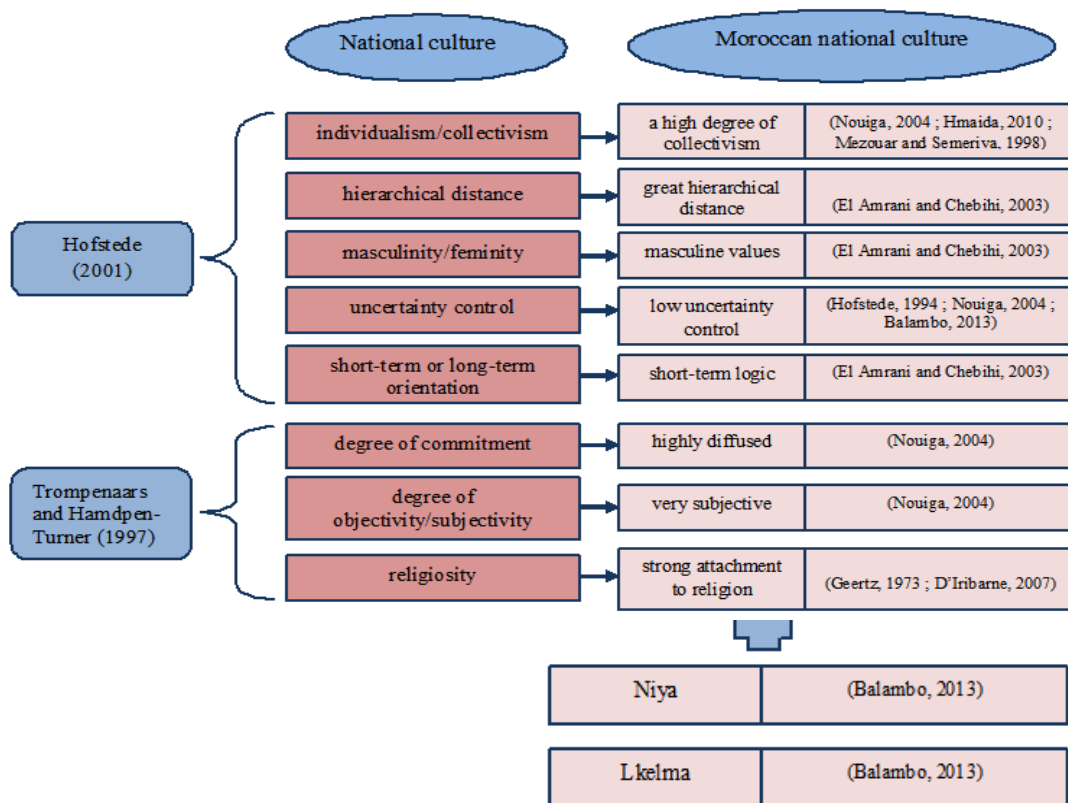

Figure 4: Theoretical framework of organizational culture
Source: Developed by authors (based on literature review)

Figure 4 summarises the different dimensions of national culture, as well as the characteristics of Moroccan national culture according to these dimensions. In particular, the most widely recognized cultural dimensions are those described by Hofstede (2001) cultural framework. Moreover, we have enriched this framework with Trompenaars and Hampden-Turner (1997) cultural dimensions. The first cultural dimension concerns *individualism versus collectivism*, which refers to the importance given by an individual to his or her personality or entourage

(Hofstede, 1983). Nouiga (2003), Hmaida (2010), Mezouar and Semeriva (1998) consider Moroccan culture to have a high degree of collectivism, with relationships characterized by strong ties and a predisposition to mutual aid. Partners tend to build emotional bonds, and individual benefits from the benevolence and protection of the group, which owes them loyalty in return. Thus, the collective takes over the individual.

The second dimension concerns the *hierarchical distance* (low versus high). Thus,

Ali and Wahabi (1995) state that the dominant attitudes within Moroccan companies are obedience, respect for hierarchy and status, and consequently, a rather undeveloped spirit of initiative. In turn, El Amrani and Chebihi (2003) and Benabdeljlil (2012) observe that the management style in Morocco is distinguished, globally, by a great hierarchical distance.

The third cultural dimension is *masculinity/femininity*. It refers to the relationship between "hard" values such as excellence, gain, competition, and "soft" values such as mutual aid, solidarity and empathy. Thus, El Amrani and Chebihi (2003) observe that the mode of management in Morocco is distinguished, globally, by the domination of masculine values.

The fourth dimension is related to the *degree of tolerance of uncertainty*. As Hofstede (1994) and Nouiga (2003) point out, Moroccan national culture is characterised by low control of uncertainty (Balambo, 2013).

Another cultural dimension is the *short- or long-term orientation* or "time horizon" of a society. According to Lichtenthaler (2008), open innovation is a long-term process, the financial outcomes of which are not immediate, short-term oriented companies may not be satisfied with the open innovation approach. Thus, El Amrani and Chebihi (2003) observe that the management mode in Morocco is distinguished by short-term logic and opportunism.

The sixth dimension is related to the *specific/diffuse*, or the *degree of commitment*. Nouiga (2003) points out that Moroccan national culture is very diffuse. In this type of culture, members do not see the boundaries between the different aspects of their lives, consider private life as linked to professional one, and place more importance on personal contacts than on professional relation.

Trompenaars and Hampden-Turner (1997) proposed another dimension that is the *degree of objectivity/subjectivity*. In subjective cultures, business relationships are marked by "a range of emotions," affection and subjective attitudes guided by feelings, with the display of emotions being seen as a sign of trust and involvement. Thus, Moroccan national culture

possesses characteristics of a very subjective society (Nouiga, 2003).

The last dimension integrated in this study is *religiosity*. Even though religiosity is not a part of the original model of Hofstede's national culture, we were inspired by Schwartz and Huismans (1995), Saroglou et al. (2004), as well as Balambo (2013) works, which evoke religiosity as an interesting variable to study in the Moroccan context. Thus, Moroccan culture is characterized by a strong attachment to the religion (D'Iribarne, 2007, Geertz, 1973).

In addition to the eight cultural dimensions presented above, Balambo (2013) have added two virtues characterizing traditional culture in Moroccothat exert a certain influence in the sphere of business, namely *Niya* and *Lkelma*. The virtue "Niya" was retained as a cultural component that could influence the process of developing trust in the Moroccan context. This cultural component always influences the behaviour of actors operating in a post-traditional society. It is multidimensional and complex and can be defined as a virtue that provides continuity between intention and action (Balambo, 2013). Bū-Ruqaiya (2011) considers the Niya to be a type of unconditional faith that forms the basis of interpersonal, economic and social relations in the Moroccan cultural context. The virtue "Lkelma" refers to the value of the word given. In the consciousness of Moroccans, a man who has Lkelma is someone we can trust and who honours his words and his commitments (Balambo, 2013).

3. METHODOLOGICAL CHOICES AND RESEARCH DESIGN

We position in the *epistemological interpretative paradigm*. We, therefore, consider that social reality is subjective and that it is constructed through the mix of the actors' intentions who build the meaning of this reality through the sharing and confrontation of their interpretations. Thus, the *qualitative approach* is adopted. This approach is well adapted to the needs of our research because it is consistent with the study of invisible, not directly observable objects, such as the actors' feelings, thoughts, intentions, motivations, fears, hopes, and which allow approaching the

personal mental perceptions of the actors interviewed.

Based on the interview guide developed following the literature review presented above, *22 semi-directive interviews* with the representatives of four categories of actors in open innovation projects (university professors, business leaders, engineering research labs executives and cluster managers) within the three Moroccan clusters were conducted. Each interview lasted from 45 to 90 minutes. Our *interview guide* consisted of two axes. First, the interviewees were asked about their experience of participation in the open innovation projects within the clusters. Then they were asked about the difficulties they went through while participating in these projects. All interviews were recorded and then transcribed.

The study is based on the *strategy of multi-site study*, that is considered by many authors to have the advantage of deepening and strengthening understanding, as well as increasing the generalizability of the results, by confirming that the findings observed in such context are not purely idiosyncratic. Our cases were selected using the explicit sampling method guided by our research questions and theoretical framework. The examination of a series of similar cases at the first site (first regional cluster) allowed us to understand in-depth the findings obtained. Then, we tried to intensify our results and increase the validity and stability of our findings. Thus, we followed the *successive replication strategy* advocated by Yin (1991), which states that if the finding is true in a context and is also true in a comparable context, then the finding is more robust. Thus, we chose three clusters that all present a similar context and operate in interconnected sectors, namely the Electronics, Microelectronics and Mechatronics Cluster of Morocco (CE3M), the Solar Cluster of Morocco and the Cluster of Moroccan Technical Textiles (C2TM).

Concerning the selection of people to be interviewed within each case study, we adopted the *snowball or chain effect sampling method* proposed by Miles and Huberman (2003). This method involves identifying good cases through people who know other people who know cases rich in information. Therefore, we have chosen the iterative approach based on the progressive constitution of the sample by successive iterations. *Theoretical saturation* was achieved to ensure the robustness of our data collection. Theoretical saturation is the point where the redundancy with previously obtained data appears (Glaser, & Strauss, 1967). Following Yin (2016), we continued our semi-structured interviews until the data collected no longer provided new information (or incremental learning was minimal), and the marginal information did not challenge our built frameworks. We have translated our empirical data into theoretical concepts through the *abstraction method* using *open coding* (Strauss, & Corbin, 1990; Thietart, 2014). Then we encoded our data using the *method of thematic analysis* with *Nvivo 10 software* and the unit of analysis was a paragraph.

Table 1: Justification of methodological choices

Methodological Choice	Justification
Abductive approach/Hybrid exploration	The concepts we have mobilized are sufficiently studied in literature
Qualitative approach	Consistent with the study of objects non directly observable (feelings, thoughts, motivations, attitudes)
Semi-directive individual interview as a data collection mode	Develops a deep understanding of the phenomenon in its context and the meaning that individuals attribute to it
Multiple case study	Increases the generalizability of the results and deepens the understanding and explanation of the phenomenon
Successive replication strategy as a case sampling method (Yin, 1991)	Verification of results in similar contexts increases the robustness of these results
"Snowball or chain effect" as an intra-site sampling method (Miles, &Huberman, 2003)	Increases the contextual nature of the knowledge produced

Thematic analysis method (coding unit = paragraph) via Nvivo 10 software	Facilitates the identification of relationships between nodes
Mixed analysis strategy (case-oriented + variable-oriented; intra-site + inter-site)	Allows analysis of components that do not obscure the study of all sites

Source: Developed by authors

4. RESEARCH FINDINGS

Since we position in the epistemological interpretative paradigm and the qualitative approach, to be able to transfer the findings of our study, the knowledge of context is very important. In Morocco, the Ministry of Industry, Trade, Investment and Digital Economy determined the cluster as "an association constituted following Dahir No. 1-58-376 dated on 15 November 1958 as supplemented and amended, whose members are companies, research or training centres and institutions, operating in the industrial and technological sectors, with a common development strategy and whose statutory purpose is to stimulate the emergence of the best innovative collaborative projects" (Amine, 2016). The cluster allows companies to benefit from competitive advantages thanks to the "externalities" it generates and develops for its member's collective actions oriented towards innovation in all its forms: technological, service, marketing, training, strategic watch etc.

The promotion and encouragement of cluster initiatives in Morocco is done through support for approved (accredited) clusters. The accreditation of clusters is done according to two processes. The first process is spontaneous, when the companies organize themselves in a particular sector, in partnership with academic stakeholders to prepare a coherent proposal to submit to the ministry, with a clear vision and quantifiable objectives. The second process is initiated by the Ministry that launches a call for tenders or organises sectoral workshops targeting the most promising sectors according to national industrial policy. Thus, the manufacturers in these sectors are informed of the Ministry's strategy and are sensitized to the interest in clustering (Amine, 2016). This is the way of the call for tenders which was chosen as the main one.

Figure 5: Cloud of the most frequent words: cultural obstacles of open innovation projects within Moroccan regional clusters
Source: Nvivo 10 software output

The textual analysis presented in the Figure 5 shows the frequency of the 30 most used words, represented as above. The most frequent words are „project", „culture", „Moroccan", „person", „work", „respect", „administration" and „communication".
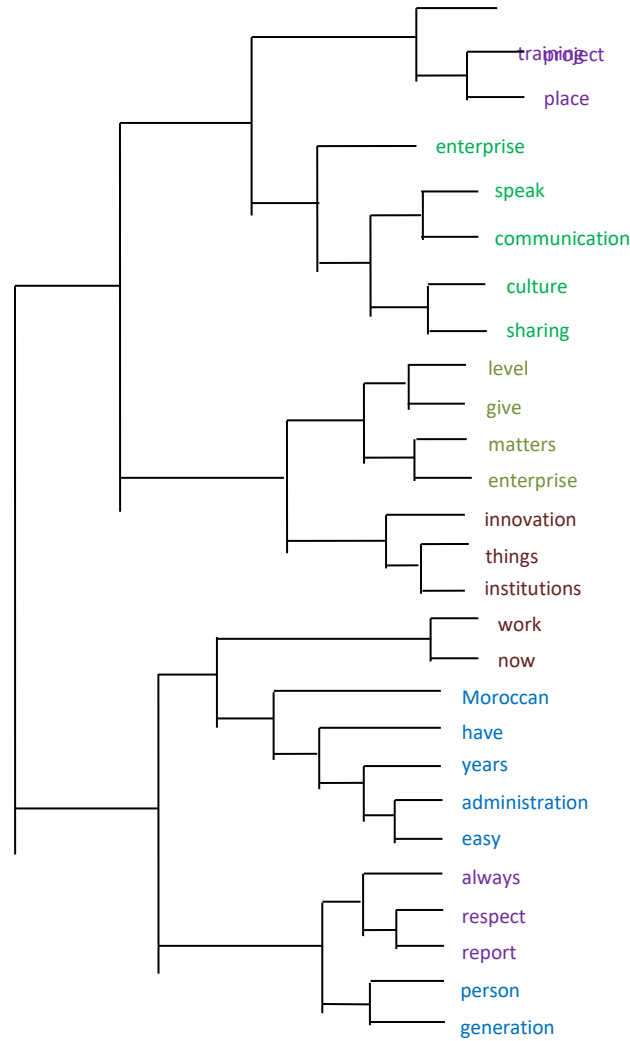
Figure 6: Word tree: cultural obstacles of open innovation projects within Moroccan regional clusters
Source: Nvivo 10 software output

The "word tree" presented in Figure 6 shows that the combinations of the words „speak" and „communication", as well as „culture" and „sharing" are very often used together in a single sentence. Furthermore, the combination of the words „respect" and „report" is used together in a single sentence with the combination of the word „person" and the word „generation".

Concerning thematic analysis, it can be noted that the place of culture is crucial in the context of inter-organizational projects, that involve different partners.

"It is the cultural shocks, cultural clashes that make sometimes the advancement of the project hindered through cultural biases."

(Senior manager at the Engineering Research Lab)

"We contrast with intra-company projects where we need to have a minimum of communication because people share already a common culture ... When we bring together people from different cultures ..." (Head of the Cluster)

The culture of the open innovation projects partners within Moroccan clusters can be characterized as a ***poorly developed innovation culture***, which is manifested by several phenomena underlined by our interviewees. First, there is a *lack of ambidexterity*. For Moroccan companies, innovation is not a priority, and they are much more oriented

toward day-to-day management and do not adopt the ambidextrous approach.

"Companies whose capacities are often in daily management are in a hurry to achieve the things that allow them to have visibility. Innovation is a little more complicated." (University Professor)

Second, there is a *fear of change* and resistance to change factor. As long as it works, companies are afraid of changing things, in order not to stop the production process.

"These are companies that have well-planned processes ... We don't dare to redefine, we don't dare to improve ... As long as it works, why am I going to change?... When you talk to them about innovation .... for them, it can affect the production process ... They have the phobia of stopping production." (University Professor)

Another manifestation of a poorly developed innovation culture is the *lack of patience*. Often, the leaders who are responsible for the fate of the projects do not understand that the R&D project is an uncertain mission with a distant time horizon. For them, companies have time constraints and time costs money, given that the innovation process is not done in the short term.

"... if the manufacturer invests to generate profit immediately then it is not innovation because innovation demands patience ... " (University Professor)

This may be related to the short-term logic that characterizes Moroccan national culture (El Amrani, & Chebihi, 2003).

The *failure of management to encourage employee initiative* is seen by our respondents as a barrier to open innovation. The managers in Morocco do not encourage talent and initiative. This is possibly due to the high hierarchical distance that characterizes Moroccan culture (Benabdeljlil, 2012).

"When someone proposes something, we try to undervalue his work. We have a culture of underestimation ..." (The top manager of the company)

Another manifestation of the low-level innovation culture is a strong aversion to risk

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and the negative perception of failure in society (*fear of failure*).

„ ... in Morocco, ... as long as we talk about innovation, we are afraid of failure ... it is about a culture ... Whereas in the Anglo-Saxon system, ... a person who has already failed is considered a persevering, a determined person and a person who learns, whereas in Morocco he'll be completely ruined." (Head of the Cluster)

Similarly, companies have a strong risk aversion because they are afraid of investing in projects whose outcome is not 100% secure.

„ ... the manufacturer ... he will not show any interest in your project until he sees clearly ... he will ask himself if the project will be completed ... if it will produce incomes or not ..." (University Professor)

The *culture of ease „turnkey"*, so the preference to have an easy and ready-to-use solution instead of developing an innovative product by itself does not contribute to the success of collaborative innovation projects.

„Unfortunately, the strategy of Morocco is that ... technology, process ... everything ... is imported ... There is a culture of „turnkey"!" (The top manager of the company)

„Today, we can make local solutions, but sometimes we struggle because we always have this preference to go looking for a ready solution." (Senior manager at the Engineering Research Lab)

The origins of this behaviour can be varied. Among other things, we can assume that this is possibly related to Moroccan national culture characterized by the strong control of uncertainty (Nouiga, 2003).

Among the main cultural phenomena mentioned by our interviewees is the trend to favour everything that comes from the west by copying successful models elsewhere without adapting them to one's context *(mimetic behaviours).*

„The innovation culture ... this mentality ... which ... copy the production methods, who import the machines, who import the methods

of making, who imports the processes. We must break with this culture". (Cluster Leader)

The organizational culture of our interviewees can be also characterized as a ***low-level open innovation culture***, which is manifested on different levels. First, there is a *resistance to collaborate*. The majority of the interviewees emphasizes on the lack of collaboration.

"… in Moroccan culture, there is not much … sharing … It is difficult to set up collaborative projects." (Head of the Cluster)

„It is this mindset that is lacking because companies in Morocco are not used to co-collaborating, they participate but they do not collaborate … " (Head of the Cluster)

Second, there is a *resistance to knowledge sharing.* Companies are always afraid of disclosing their professional secrecy because of information leakage to competitors. This is partly linked to the fear of losing sales.

"… there is also the culture of sharing… I have had some experiences throughout Europe and North America, and I have noticed… that in Morocco, we have a very closed culture, … Sometimes it will go to schizophrenia… we are afraid of information leaks". (Cluster Leader)

Although Moroccan culture is usually considered as a culture of sharing, mutual aid and solidarity, the speeches of our interviewees show the opposite (culture of self-interest). Thus, our findings contradict those of Nouiga (2003), Hmaida (2010), Mezouar and Semeriva (1998), that describe Moroccan national culture as a culture with a high degree of collectivism.

"… it is rather cultural … the Cluster does not progress at high speed because of the culture of personal interest … Everyone wants to go at the same time, which blocks everyone's mobility." (Senior manager at the Engineering Research Lab)

"… it's cultural. … we are egocentric. The majority of people in Morocco … it is self-interest that comes first." (Senior manager at the Engineering Research Lab)

The „sincerity" factor was mentioned as one of the keys to the success of collaborative projects. On the other hand, *opportunism* breaks the cohesion within the project team. This confirms the findings of El Amrani and Chebihi (2003) who observed that the management mode in Morocco is distinguished by the logic of opportunism.

„… there are some persons in the cluster … who are much more in … the logic of budget consumption … and it started … to not keep the overall cohesion in the team…, and it became a kind of friction between each other." (The top manager of the company)

„About … collaborative projects … as long as there is no sincerity … we will always see constraints and problems that retard the deadline." (University Professor)

„I have someone who can take the project once the patent is there … It is among the blockades that we have … I tell myself why I'm going to work for X or Y. So, I'm going to retire and go do it myself." (University Professor)

Besides, several points characterizing ***Moroccan national culture*** that impact open innovation projects within the clusters were selected following the speech of our interviewees. First, there is a *failure to meet deadlines.* Indeed, the relationship to time (respect for schedules) was mentioned by the interviewees as causing a human difficulty that hinders the progress of collaborative innovation projects.

„… when you launch a project, you have to respect the different deadlines and that too we found huge difficulties … There is motivation, everyone wants to do. They want to achieve, but concretely … we are wasting a lot of time." (The top manager of the company)

Second, there is a *non-compliance with commitments.* Not fully investing in the project and not meeting its commitments is also a barrier and delay deadlines. "We don't fully give ourselves."

„… they can say, "I didn't have time to do it because it is a holiday, … because we are in exam period etc. … we do not honour our

commitments, and we always make excuses." (University Professor)

„...it is true that unfortunately the Arab-Muslim culture, we are a little bit lenient." (The top manager of the company)

Finally, a certain fatalistic culture, total trust in God and the fact that work and faith are inseparable have been the subject of criticism by some interviewees. Thus, our findings confirm the work of Geertz (1973) and D'Iribarne (2007) who stress that Moroccan

culture is characterized by a *strong attachment to religion.*

„There is always this fatalistic notion, quiet, „in the hands of Allah", „inshaAllah". When I respond to the requirements of my clients or others, I have ... the level of quality to be given, respect for timings to be given ... Faith, normally, is us in our relationship to God. Work is something else!" (The top manager of the company)

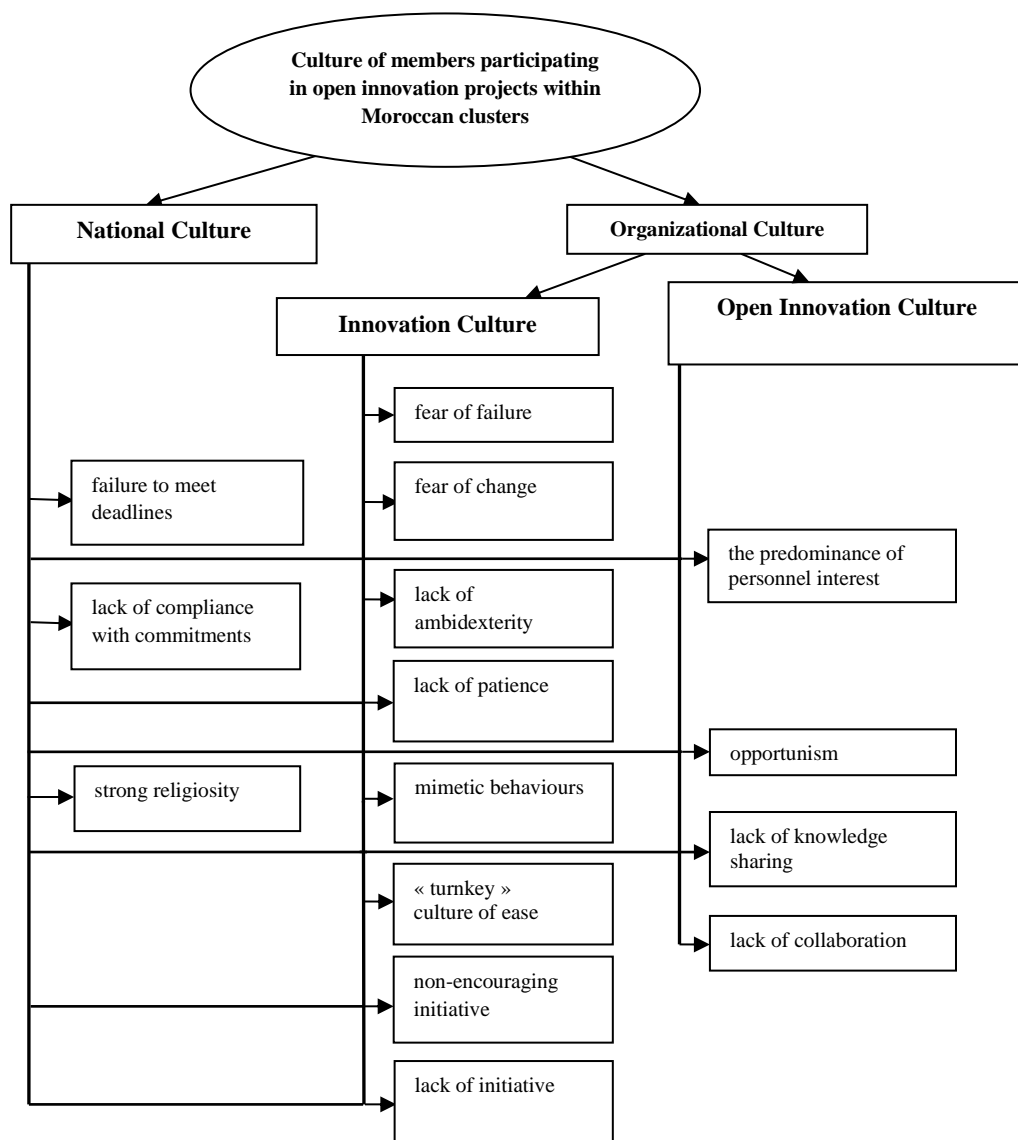All our findings can be summarised in the visual form of Figure 7.

Figure 7: Human difficulties related to culture in open innovation projects within Moroccan regional clusters
Source: Developed by authors

5. CONCLUSION

This research paper investigated the challenges of open innovation from a cultural perspective. A series of interviews with four categories of actors involved in open innovation projects within three Moroccan clusters were conducted. The findings have allowed us to characterize the culture of the partners concerning organizational culture, in its two aspects, innovation culture and open innovation culture, as well as the level of Moroccan national culture which strongly influences the organizational culture. The results obtained confirm Bogers et al. (2019) and Teece (2020) observations. In particular, as "open innovation" is a relatively new concept in Moroccan context, it is always a question of successfully transitioning from the closed approach of innovation to the open innovation paradigm.

The results of our research have implications for managers of organizations that intend to participate or are already participating in open innovation projects. In particular, it is recommended to pay attention to the organizational culture of their entity. All possible methods, among others, HRM practices, are useful to transform their organizational culture by bringing it as close as possible to the open innovation culture. Thus, there is a need to transform the organizational culture to promote compliance with commitments and deadlines, to develop strong innovation culture, to move from the "turnkey" culture of ease and imitation towards the innovation culture based on risk-taking and controlled fear of failure, to develop the sense of ambidexterity, of patience, encouraging talent and the reason for the initiative. In addition, a strong open innovation culture must be developed, promoting collaboration, the interest of the group and knowledge sharing. The culture of open innovation creates an atmosphere of trust, encourages teamwork and minimizes opportunism; by setting a common goal that will guide all partners towards it and by finding the appropriate means of motivation for each partner.

As all research has its limits, ours is no exception. We conducted our study with only three clusters, whereas there are currently about fifteen accredited clusters in Morocco.

Thus, we cannot have a global view of all the Moroccan clusters, and our findings are valid only for the context of the three clusters studied.

In this connection, certain research perspectives seem interesting. In particular, another research could be carried out in the future in the same field, but in the context of other Moroccan clusters, which operate in other sectors, such as agri-food, fisheries, luxury products etc. Also, since culture is often the antecedent of other phenomena, it would be interesting to link organizational culture to other concepts to find out what type of relationship governs them in the context of open innovation. Finally, it would be interesting in the future to deepen the research in the field and to see which HRM practices would be more adequate to transform the organizational culture and make it adapt to the challenges of open innovation within Moroccan clusters, with a greater focus on collaborative HRM practices.

APPENDIXES

Appendix 1: Semi-Directive Interview Guide
Good morning, Mr/Mrs. Thank you for this interview. I am conducting research on the human dimension of open innovation projects within Moroccan clusters. The objective of this research is to discover the difficulties that can hinder the success of collaborative innovation projects and understand their reasons, based on the scientific literature and based on global experience in the field. I guarantee you the anonymity and complete confidentiality of everything that has been said by you. Do you mind if I record this interview?

Introduction/Context: Tell me in general about your experience of participating in innovative collaborative projects.
First of all, I would like to ask you to tell me in general about your experience of participating in innovative collaborative projects. When I say "collaborative innovative project", I mean the project of development and design of an innovative new product by an inter-organizational team, which involves not only one company but also other partners: research laboratories, Professors of universities, public or private institutions etc. Let's take the case of a concrete project:
  • What was the project about?

• Who were the project partners?
• How were the cooperation, meetings, and exchanges?
• How long was the project?

Axis 1. Human difficulties encountered.
Main question: Tell me about the difficulties you encountered when participating in these projects? Follow-up (relaunch) questions: depending on the respondent's response.

Axis 2. Culture
Tell me about the place of culture in the open innovation project within the Moroccan clusters.
What are the values and norms that can characterize the culture of your organization?

Appendix 2: Grid of the thematic analysis in Nvivo 10
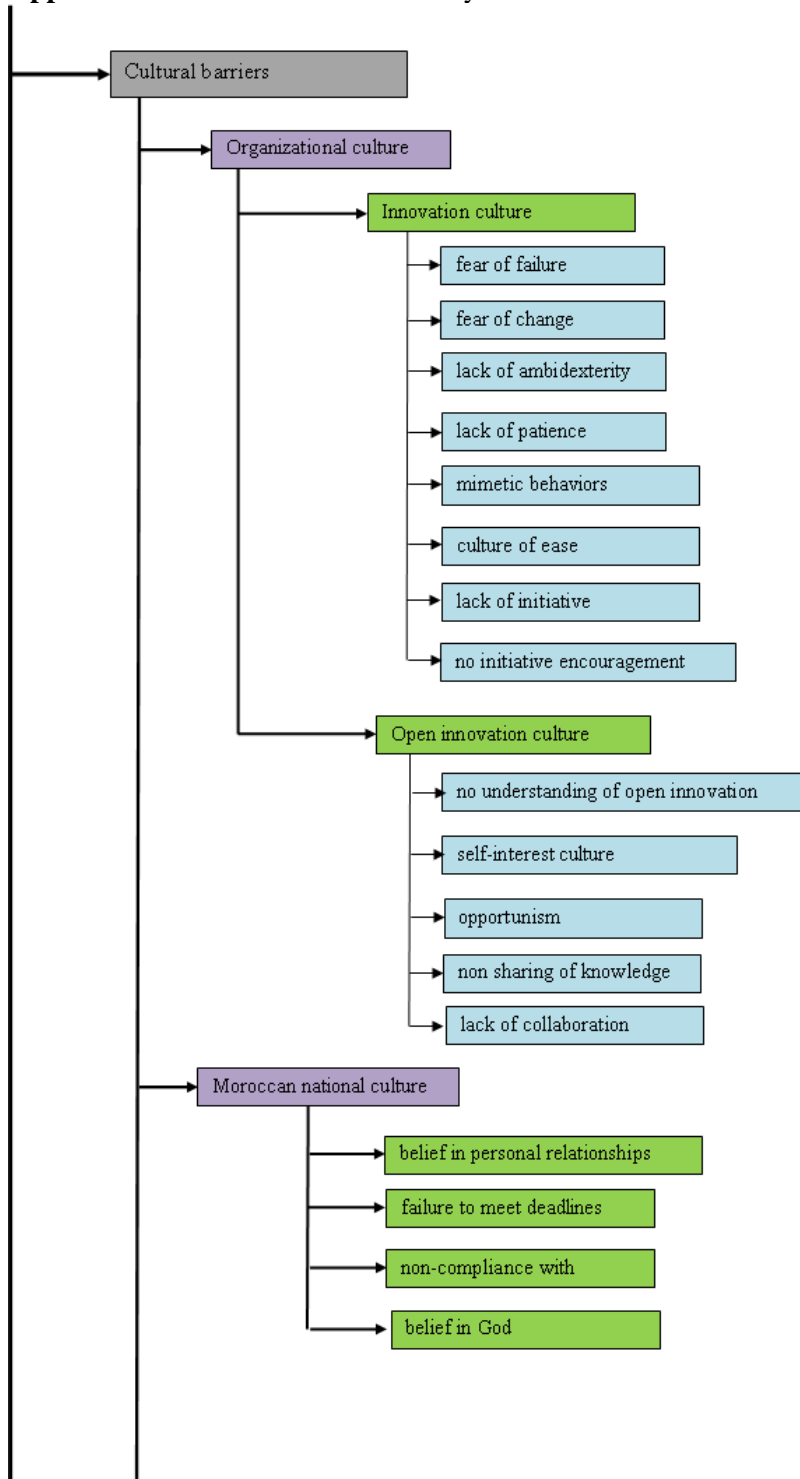
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