

EDINBURGH NAPIER UNIVERSITY

Master of Science
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**USE OF “TERRITORIAL INTELLIGENCE” IN THE
DEVELOPMENT OF INDUSTRIAL CLUSTERS IN MOROCCO
CASE OF THE FIRST SEAFOOD PROCESSING CLUSTER IN MOROCCO**

By

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First Chapter: Introduction on the research purpose and background to the research area

I. Research purpose, method and approach

1.1 Research purpose

Clusters development is attributable to several factors, including technology and knowledge transfer, development of a skilled workforce in related industries, the benefits of agglomeration economies, and social infrastructure. But in a global economy, more competitive than ever, clusters are confronted with firms' location or relocation, and have to deal with investment volatility. The amplification of worldwide economic changes and the importance of innovation in the competitive processes outline a new form of economy. The production and research organization in the knowledge economy relies on increased interaction between different actors. In this context, territories play an important role. For Pierre Veltz (2002), in this new economic and technological context, it is the intelligence of combining multiple resources that makes the difference between the territories. Thus, territories have to act in a worldwide territories competition environment.

This paper will focus on two major and innovative aspects of clusters policy:

- The emergence of a new territorial industrial policy that combines public and private actors
- The emergence of a territorial intelligence around industrial clusters.

Thus, this research will try to demonstrate that territorial intelligence (TI) is more than ever a major factor in developing and strengthening the competitiveness of economic operators, including clusters and their members.

To reduce the scope of the research, the example of Morocco was taken. Its decentralized governance, taking into account the diversity and variety of each activity pool, led to the establishment of several sectoral plans and strategies to better fit the great dynamics of globalization. This research will concentrate on the fishing and seafood processing industry, for which a new strategy has just been announced by the Government: The "HALIEUTIS Plan". It is an integrated sectoral

approach that aims to develop a sustainable and competitive fishery. One of the main objectives of this new strategy is the creation of three seafood processing clusters in the country. Through this research I will try to address the TI approach within Souss Massa Draa (SMD) cluster, as the first seafood processing cluster in Morocco.

The main purpose of the research will be to demonstrate how important it is for this cluster to implement a comprehensive and systematic TI approach, to promote innovation and creativity and to sit the basis for strategic decision-making systems. The research results will try to address how TI can provide answers to the needs of the SMD cluster competitiveness in its development efforts (identification of partners, competitors or complementary clusters) and strengthening its position to develop internationally. Then, the research questions that will be addressed are:

-How “Territorial Intelligence”(TI) and “Economic Intelligence” (EI) systems and methods, can be applied in the further development of SMD Cluster?

-How the collect of strategic information, anticipation, heritage protection, monitoring developments would help the SMD Cluster to position itself against its competitive environment?

1.2 Research Method

According to the identified scope of this research, narrowed down to the study of single cluster in the country (the SMD cluster as a network of local actors), whose different stakeholders are already identified, the approach chosen is the “case study”. This approach perfectly fit the context of the research. In fact, the case studies are generally used to study particular phenomena in a particular setting, which is the case for this dissertation.

Indeed, this approach will be used to determine if the use of TI can contribute to the SMD cluster development, as it is the case for several clusters in the world that capitalize on TI systems to increase their competitiveness.

For this purpose, an inductive research method was adopted. In fact, the observation of empirical data was used to evaluate the efficacy of the dissertation theoretical frameworks, i.e. the contribution of TI to cluster development.

This confirms the choice of the case study approach which is considered as a pertinent method in terms of questioning accepted theory. Moreover, the use of case study approach is also justified by the fact that this research is primarily conducted in order to identify good practices in term of TI systems in favour of clusters development. Therefore, investigations have been implemented as part of a comparative approach to make the Moroccan clusters benefit from international success stories.

Primary sources of data have been used for this research, since this theme is conducted for the first time and the gathered information is not necessarily available, especially as the concept of TI remains relatively new in Morocco. Different tools have been used to acquire information in order to meet the dissertation purpose and address the research questions. Thus, a mixed data collection approach has been adopted: in addition to the use of observation, interviews have been conducted.

The first step was the identification of the target group and the persons involved in the field of TI and SMD cluster development:

- decision makers at the local and national level;
- local authority and government departments;
- universities and research institutions;
- professional associations, experts and consultants,
- industrial corporations / private businesses of the SMD cluster

A questionnaire was designed, tested and used to identify specific information or to confirm assumptions about the TI systems concept within the target group. Interviews were performed as face-to-face interview or over the phone. The interviews concentrate on some key questions and a free chat with the interviewee as well. To increase the willingness to fill out the questionnaire or to accept make interviews a management summary of the results was promised to be offered to the respondents. However, case study approach can have some limits. It is considered as be narrow in scope and then, the generalisation from it could be difficult. If we take the example of this research, it is not possible to adopt a sampling approach that seeks to generalise conclusions reached at the case of the Souss Massa Draa cluster, since the conditions and characteristics of each cluster (as observed unit) are unique and can't be generalized. However, the TI approach as a mean to foster clusters development can be generalized.

Another difficulty with the approach is that it is particularly useful for the analysis of organisations as static units; however, ensuring access and continuity to organisations observed can sometimes be problematic.

Those limits lead us to reflect on consideration of reliability and validity issues. Regarding the validity of the model, the survey lay on a universal approach for the implementation of a TI system that was exactly applied in order to select the most relevant variables to answer research questions and ascertain the causal relationship between the programme and the outcome.

Since the research involves the collection and analysis of perceptions around the concept of TI and its estimated impact on the development of clusters, the key variables were clearly identified in order to insure the validity and reliability of the research method adopted. Thus, through the investigation phase, all the concepts used in the research had clear and an unambiguous definition in order to make all respondents sharing the same understanding and interpretation of what the research is measuring. This can guarantee to make sensible and useful generalisations from the research findings.

1.3 Research objectives and approach

The overall aim and specific objectives of this research can be summarized as follows:

- Define the concept of TI system within the regional seafood cluster
- Test this concept with a wide range of policy makers and local actors
- Define a plan for implementing a TI system within the regional cluster

To achieve this purpose, a pragmatic approach structured in three phases has been adopted:

Research framing:

This first phase will be fully detailed in chapter 2 related to the description of the SMD cluster, its current status and future development. It includes:

- Description of the general context of the country
- Analysis of the Seafood processing cluster in Souss Massa Draa
- Identification of key stakeholders and local actors
- Development of the final approach to the research

Definition of Territorial Intelligence concept

This second phase will be fully detailed in chapter 3 related to the definition of TI Scheme within the SMD cluster. It includes:

- Development of the concept
- Testing the concept through interviews
- Analysis of the survey results

Proposal for the implementation of territorial intelligence system within the cluster

This research phase will be fully detailed in chapter 4 related to the implementation of TI Scheme within the SMD cluster. It includes:

- Finalisation of the concept
- Means and Governance terms
- Implementation plan

1.4 The extend of the research

The results of this research will be primarily intended for local actors and decision-makers responsible for identifying, promoting and defending the key issues of their territories. Indeed, policymakers in Morocco, where the contribution of EI to the economic strategy development is still embryo, (whether across the government or corporate) will benefit from the TI approach proposed for the development of the SMD cluster, and could then replicate this approach for other clusters.

They can also be interested in the research conclusions, the main stakeholders involved in the development of clusters (local authorities, government departments, universities, laboratories, professional associations, consultants, etc...). More generally, the research findings will be aimed at research institutes, in addition to political scientists, economists, business scholars, and development studies scholars.

II. Background to the research area: Current knowledge

TI was born within the information society from which it uses technologies and tools. It also shares the concerns of sustainable development and defends a global approach based on people's current and future needs, partnership and effort mutualisation. In the knowledge-based society context, TI presently emphasizes the link between knowledge production and territorial action, as well as the importance of the human and social capital in the innovation process.

The concept of TI was mainly handled by information and communication sciences and by knowledge management, as a cognitive and organisational process of economic sciences and geography, to analyse the territories structure and dynamic as geographic spaces and as a space of the human communities' project development.

The TI systems widely mobilize the information technologies to gather, share, analyse and exploit in a cooperative way, and then to diffuse pluri-disciplinary knowledge and multi-sector information. They are data-processing systems that broadly appeal to the geographic information systems, data statistical analysis and projects management and evaluation.

Defined as a cross-curricular theme affecting both trade, industrial, technology policies, as territory planning, EI has become a form of companies' competitiveness organization, but also a main for territories development. More and more Governments develop instruments and vital tools to the establishment of a TI system in order to avoid being in the position of follower according to Heinrich von Stackelberg (1932) theory.

So, the question is to know under what conditions a TI system can lead to local development? To properly address this issue, we will see in the first part of this section the contribution of TI by combining two approaches, the economic intelligence and the territory. Then in the second part, we will focus on the content of such a vision and its challenges in terms of cluster development.

2.1 From Economic Intelligence to Territorial Intelligence

Empirically, the economic intelligence is not a new phenomenon as several examples demonstrate the existence of such practices since the Middle Ages. Theoretically, the conceptual approach of EI was born in the mid-1980s and refers to M. Porter and V.E. Millar article about "*How information gives you competitive advantage*"¹. According to Porter, ICTs are transforming products, production processes but also the nature of competition by affecting firms five forces of competitive environment. Then, research and dissemination of strategic information becomes a necessity, both for firms and territories.

This assumption leads us to the study of EI as a device for management decision making (Bouchet 2006)². In his book "Organizational intelligence", Harold Wilensky (1967) defines EI as: "*the economic activity of producing knowledge, that serves organizations economic and strategic goals, collected and produced in a legal context and from open sources*". But, we observe that the definition of the EI concept may take different directions depending on the observed structures: enterprises, Government bodies or other entities.

According to Franck Bulinga (2002), the difficulty in defining EI is due to the complexity of this multidimensional concept that was evolved through several disciplines. For Bulinga, EI encompasses and goes beyond the simple monitoring device. The documentary information remains a part of EI, however, it fits into a process of knowledge production in a dynamic linking information to action. In fact, EI produced an "*InfoAction*", allowing a pro-activity and interactivity (Bulinga 2002).

With its multiple facets (monitoring, benchmarking, influence actions, knowledge management ...), EI can take into account the local and remote environment both in time and space. In other words, it is an instrument of good governance by and between the actors around shared or joint projects.

¹ M. Porter and V.E. Millar, (1985), « How information gives you competitive advantage », *Harvard Business Review*, 63 (4), july/august, pp. 149-160.

² Yannick Bouchet, Ph.D. Information & Communication, (2006) "Device of territorial economic intelligence and hybrid governance", Jean Moulin University, Lyon 3 France

This ties the definition given by A. July (2004)³, "*The economic intelligence consists in the mastery and protection of strategic information for any economic actor. Its three objectives are: the industrial competitiveness, the security of the businesses economy and the strengthening of the country influence*". This definition adds an essential element: "information protection and security".

But, is it EI permissible at territorial level? According to Jean-Maurice Bruneau (2004) we must distinguish between companies' business management and authorities' territory administration. These bodies with different activities have neither the same purpose nor the same strategy. Thus, a new concept was developed: Territorial Economic Intelligence (TEI) that is characterized by the relevance of the local actors' strategies. Some authors have attempted to define this new research topic, for example: designers of Zeknowledge⁴ web site, which connects monitoring to territory development; or Philippe Dumas (2004)⁵ and Jacques Fontanel and Liliane BeanShell (2005) or Philippe Clerc (2008)⁶, that implement the EI methods to territories management and governance.

However, according to Remy Pautrat and Eric Delbecque (2009)⁷, TEI, that is recently qualified "*territorial intelligence*", goes beyond management science framework or the application of specific EI instruments. The TI must be understood as a political response to the challenges of the open economy, i.e. as a profound renovation of industrial policy and territory planning.

Thus, TI is a new process for the exchange of strategic information at the local level. It encourages local dynamics and manages strategically the diversity (and therefore wealth) through local networking, including clusters. According to (Goria 2007)⁸ TI is primarily based on the implementation of EI and knowledge management actions for organizations and companies belonging to the same geographical area.

³ A. Juillet, (2004), « Référentiel de formation en intelligence économique », p. 2,

⁴ http://www.zeknowledge.com/intelligence_territoriale.htm

⁵ Philippe Dumas from the Atlantic Institute of Territories Development

⁶ Philippe Clerc, Director of EI, innovation and ICT at the Assembly of French Chambers of Commerce and Industry, (2008) "The social intelligence, the new territory of Economic Intelligence?", IFIE edition, Paris, France

⁷ Rémy Pautrat & Eric Delbecque, respectively President and Director of IERSE, (2009) "Territorial intelligence: synergy in the public-private encounter at the service of economic development" International Journal of Economic Intelligence 1 (2009) 17-28

⁸ Stéphane Goria, 2007 "Territoriality and Territorial Intelligence Devices: A functional investigation from Intelligence management and territory notions", Nancy 2 University, Vandoeuvre-lès-Nancy, France

Despite its multiple attempts of definition, the concept of TI remains not well known. It is often assimilated to the concept of economic watch or monitoring what makes it lose the strategic and prospective aspect of its definition. Generally, TI is based on the collective use of certain resources:

- To use ICT by promoting collaborative work
- To be aware of expertise and knowledge to federate into networks and then link information to action, and finally
- To transform information into relevant knowledge, accessible and deployable by policymakers.

Thus, Philip and Yann Bertacchini HERBAL (2003) gives a strategic dimension to the TI by defining it as *“an organizational culture based on sharing and processing of signals from economic actors, and intended to provide to the decision makers, decisive information”*

The territories increasingly need to differentiate themselves by creating new innovations that still unknown by competing territories. This implies a good knowledge of its environment and this requires a watch device. But the “watch” is insufficient and remains restrictive compared to the difficulties faced by territories.

In a similar perception, Y. Bouchet (2005) confirms that the TI is a tool to ensure medium and long term territory performance and is not simply available to ensure each company own performance. Then, it is necessary that local institutions are moving in the direction of the information pooling in order to anticipate the territory threats and opportunities.

In sum, we can conclude that the TI aims to strengthen the skills of a territory while anticipating competitors' trends in terms of innovation in order to maintain competitive advantage. So, it is a real strategy tool which is based on foresight. For H. DOU *“territorial intelligence makes it possible to define the best guidelines of what could be a global solution of the area attractiveness”*. The analysis and treatment of collective information are the most important way to enable decision makers to understand and interpret trends and market realities, the positioning and direction of its competitors, partners and customers' expectations.

2.2 The contribution of Territorial Intelligence to clusters development

The clusters are inherently considered as devices of skills and knowledge networking that aims, among other things, linking companies' researches in order to bring out products that can be developed, marketed and can compete at the international level. This type of structure allows SMEs to develop, and researches to be directly applied on the industrial sector (Knauf and Gorla 2009)⁹.

Tandler (2002) uses the term "Cluster" more loosely, focusing on geographic concentration of firms with significant "interlinkages" and an "associational dynamic". We can also note that the principal objectives of clusters are *"to reinforce the competitiveness of the national territory, to make the economic development dynamic, to create or maintain industrial jobs and to attract investments and competences at the European and world level"* (Leroy 2005). In fact, international institutions and consultants promote the approach as a way to boost industrial growth through upgrading, attract foreign investment, and Develop niches in highly competitive global markets (Porter 1990, 1998 and Schmitz and Musyck 1994).

In this context, it is important to remind Michael Porter works: both about the phenomenon of "competitive advantage", and its analysis of "clusters". According to Porter (1998) clusters are defined as: *"geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition"*. Furthermore, Porter (1993)¹⁰ affirms that the nation's competitiveness is directly linked to the attractiveness of their multiple territorial productive conditions.

Then, we can underline that the public policy of TI has a theoretical foundation in management sciences. The completion of the "competitive advantage" model developed by Porter is closely linked to the concept of "cluster".

Moreover, the TI also reflects the requirements of new forms of management that could be applied to a particular cluster, especially "project management" related to the notions of competence and network. Indeed, the TI promotes the construction of operational networks of expertises that operate horizontally.

⁹ Stéphane Gorla & Audrey KNAUF, 2009 "Presenting a study of various functional forms of Territorial Intelligence implemented by the clusters towards the identification of new benefits" Nancy 2 University, Vandoeuvre-lès-Nancy, France

¹⁰ Michael PORTER, 1993 "Competitiveness of Nation", NY, USA

As stated by Dominica Genelot (2001)¹¹, *“The new factors of competitiveness are largely based on functions and cooperative networking. [...] And the overall efficiency of research and innovation is the result of complex processes. [...] But for this research to be transformed into effective innovation, it is essential to share information, to develop teams and knowledge networks, and to animate cooperation”*. We can then deduce from these definitions, that clusters are primarily focused on the notion of networks:

- Business networking (SMEs and large groups),
- Networking between the private sector (companies) and public sector (local authorities and administration, Research institutes)
- Networking between companies, research centres and training organizations.

The main objective of these links is the collaboration of all partners around technological cooperation projects to improve competitiveness. This cooperation of a relatively dense network is the focal point that will make each cluster visible and therefore more attractive.

If networks are at the centre of a TI approach, it is because they generate very significant productivity gains. Ernst D., Kim L. (2001) explains that: *“The main purpose of the networks is to provide the flagship with quick and low-cost access to resources, capabilities and knowledge that are complementary to its core competencies. The real benefits result from dissemination, exchange and outsourcing of knowledge and complementary capabilities”*.

Then, it can be deduced that the players' geographic proximity and relationships are very important elements that allow the linkage between partners from different areas around unifying goals. The networks are a necessity for the territories, and the clusters seem to be the perfect example for this assumption.

So, the question is not whether to know if knowledge dissemination can provide a competitive advantage to the cluster but rather how to master this knowledge within a network of actors. Then, two types of territories can be distinguished: territories which were able to integrate TI into their development and who master their environment changes, and those who have not undertaken this "revolution" and must follow the changes initiated by competitors.

¹¹ Dominique GENELOT, 2001, "Manager in the complexity" Insep Consulting Editions, Paris, France

It is now important to consider the TI as a source of wealth creation involving business, territorial and social logics. The establishment of a TI system within a cluster must allow a meeting and a transfer of available skills. For TI to be effective, it must come from mobilized and volunteers players. The goal is the emergence of a collective intelligence force that aims to improve the territory current situation.

From several empirical studies, B. PECQUEUR and JB Zimmerman (2004) have highlighted the common problem of "failure of coordination" between local players caused by misunderstanding of their immediate environment. Then, in order to ensure the success of a TI approach within a cluster it is essential to begin by mobilizing stakeholders around a common culture. Sharing the same idea, Yann Bertacchini (2003) defines the TI as a process in three stages: "The players are sharing information, they give credence to the received information, and soon as the communication process is established, the actors can create the appropriate networks and transfer their skills."

in addition, according to C. Marcon and N. Moinet TI can be qualified as "*economic intelligence actions conduct in a coordinated manner by the public and private actors in a localized area, to enhance economic performance and, thereby, improve the well being of local population*" (C. and N. Marcon Moinet 2006 p.99). To this must be added that the TI should not be considered as a finality but as a way to foster territorial dynamics that might create an economic and social development, improve social capital, protect knowledge, expertise and skills ... The goal is to create synergies that can stimulate innovation (as a focal point for cluster competitiveness) and master the territory endogenous and exogenous environment.

We can therefore conclude that one of the fundamental points of a successful TI system within a cluster is the existence of a public-private partnership. The role of government is central. Without a strong commitment by the Government or its local representatives, no TI system may emerge. The Government must be the "*centre of gravity of a Territorial intelligence device, because it is the only legitimate body to guaranty space organization*" (Delbecque 2006 p.172.). Then, one of its responsibilities is to facilitate the flow of information between different actors, playing the role of the network mediator, to assist SMEs through the sharing of information, and to use its local and international influence to ensure the actors economic security and protection.