

**Primary quantitative Multi Factor Analysis study in two areas
in the world in a context of comparison between
industrial and cultural clusters :
choice of items or determinants**



Keywords :

- Industrial Clusters ;
- Cultural exploration ;
- Knowledge management ;
- Innovation ;
- Multi Factor Analysis ???

Aims purchased by this study :

- to establish a parallel between industrial clusters and industrial clusters.
- to choose criteria for this quantitative comparison.
- to extract names of certain types of variables (or factors) from cultural universe in order to proceed to variables (selected) transposition onto industrial world.
- to investigate some method of data analysis coming of different sources in the context of industrial and cultural clusters.
- Finally, to use Multi Factor Analysis (MFA), is made in order to feed one cluster by the determinants of the other???

Views on cultural clusters and chosen areas :

- Cultural clusters are defined as clusters of societies by Gupta, Hanges and Dorfman (2002) -> **Effectively, they affirm that, in a social point of view, the information outted of cultural clusters could be precious in terms of knowing social parameters as intercultural similiraties or differencies.**

- Hitters and Richards (2002) introduce the fact of a creation of competitive advantage by the way of innovation in a context or urban development :

1) the autors make the capital precision that sector of creative industries is caracterized by a strong proclivity to be unified onto a cluster ->**That seems a point very interesting for finding and joining some variables to other forms of industrial clusters.**

2) central idea is the dominance of wilingness to promote economic growing as well as development of cultural infrastructures in the city.

- Clark et al (2016), made a very complete and comprehensive study on large scale of organizations in 22 contries grouped by categories and characterized by a number of criteria (24 managerial competencies). The goal that authors want to reach is competency modeling or, in another words, the managerial competencies implemented in cultural clusters -> **this is a choice among many fields of items that could easily be transposed in an industrial sector or industrial cluster. For exemple, developmental initiatives feed from competency modeling at all levels of responsibilities or tasks.**

The industrial clusters :

- Industrial clusters are organisations, widely spread in our economic world. They are defined by Porter (1998) as "geographic concentrations of interconnected companies and institutions in a particular field". The author makes a mapping in the geographic area of the United States of America -> **This represents a capital point for our proposition of study which includes à comparasion in a context of two different areas in our world, that are not defined at the moment of reflexion and redaction.**

The necessity of choosing perimeters or areas of comparison must be a primary element of reflexion and Porter, in this publication, relate the possibility of common determinants through several examples of clusters placed on the U.S. territory -> **a great sign of our interest to the research asking is the citation about two major clusters, Silicon Valley and Hollywood !!!**

Finally, this concept of cluster description might be used to find variables to extract from analysis made in some cultural clusters.

Moreover, to complete this first definition, Dang R.J. (2011) explain in her PhD work (p.27) that inside territorial clusters in USA, the different shapes of interaction allow to distinguish four types of them :

- industrial district : composed by SMEs in cooperative network ;
- Hub and spokes : enterprises that develop their business or opportunities around world groups like Boeing or Toyota ;
- State anchored district : state organisations where gravitate around enterprises.
- "Plate-formes industrielles satellites" (expression not translated) : territorial cluster with industrial structures composed by big groups or entities with external capital and external strategic decisions.

These distinctions could be the base of the pattern on which variables or new pattern coming from analysis made on cultural clusters can be applied. For that matter, Dang add that some references (Pyke, Becattini et Sengenberger, 1990 ; Dei Ottati, 1994) the importance of social dynamics economic interactions more than Marshall.

Specific case of knowledge management onto the fields of cultural and industrial clusters :

We decided to talk specifically about knowledge management because we asked ourselves a question : could this parameter be influential in managerial competencies ?

About knowledge management quoted by Castaneda and Pendaries (2013), on the basis of the distinction between tacit knowledge and explicit knowledge (Polanyi, 1967), "Nonaka identifies all the knowledge which cannot be managed by the classic methods of transfer of information and is interested in the process of exchange of knowledge by looking for the modes of relations between the actors (B to B) allowing to manage the skills (Nonaka and Takeuchi, 1995) " and it by remaining forced in paradigm of the information.

- an interesting reference to explore ??? -> **Teece D.J., (1998), Capturing Value from Knowledge Assets : The New Economy, Markets for Know-how, and Intangible Assets.**

Areas to choose in the study :

For example, ten cultural clusters were constructed based on cultural similarities identified through exploratory factor analyses (House et al., 2004) :

- (1) Anglo Cultures (e.g. England, Australia, USA);
- (2) Latin Europe (e.g. Spain, France);
- (3) Nordic Europe (e.g. Finland, Denmark);
- (4) Germanic Europe (e.g. Austria, Germany);
- (5) Eastern Europe (e.g. Russia, Hungary);
- (6) Latin America (e.g. Brazil, Argentina); (7) Sub-Sahara Africa (e.g. Nigeria, Namibia);
- (8) Arab (e.g. Morocco, Turkey); (9) South Asia (e.g. Thailand, India); and
- (10) Confucian Asia (e.g. Singapore, South Korea, China)

-> **Classification based on cultural similarity (Gupta et al., 2002).**

Chosen determinants and data analysis :

- Choice of methods and tools for identifying variables that are likely to be transposed from cultural clusters to industrial clusters.
- More than one tool can be used but we chose to use Multiple Factor Analysis (or MFA). Before all, origin of this variables or tenants (number is undifinied and unknown at this time) must be shown and we make à suggestion the sources to select.
- In fact, spirit or this proposal, subject to find an another article which proposes à similar approach, is to try à method and that's why we limit the sources.
- For now, focus is put on reports and studies obtained during development of cultural clusters, like noted by Hitters and Richards (2002) amont other possibilities like interviews with different protagonists like managers or local authority representatives -> They have listed a serie of factors like **clustering, collaboration, challenging environment or cost.**

Chosen determinants and data analysis :

- But main problem is to subdivide these factors into variables for being able to use MFA like announced in our intentions -> Preliminary, a definition of these variables, by the way of literature (Gupta & al speak of **social and psychological ones such as attitudes, values and work goals**), is waited before all calculation or analysis.
- We can note that urban areas, Lisboa or Tokyo, for illustrate it could be an extrapolation of the largest word areas defined by Gupta, Hanges and Dorfman (2002) and this can constitute à more accute title to our proposal like "Primary quantitative Multi Factor Analysis study in **West-Europe and Asia** in a context or and comparison between industrial and cultural clusters." But before arriving to this final position, it must be discussed of the well-founded in the choice.
- To revue over practices, Krafft, Quatraro and Saviotti (2011) underline the importance to establish à knowledge base (KB) with connections associated, without forgetting the problem of cost to make it by the firm. About the method, the autors measure differents properties relative to knowledge in a network context and also use **SNA (Social Network Analysis) which consists in a graph consttued of nodes and links between them** -> the goal purchased is to follow the evolution of knowledge in the sector of biotechnology, with more details, and by the way of three matrices, the dynamics of technological classes and the structure of knowledge base.

Chosen determinants and data analysis :

- We want also evoke other analysis and particularly case of collection mixed methods and of data processing, according to Jick, (1979 in Corbel and Raytcheva (2010)), the advantages of the triangulation regarding validation of the results and the contribution on second thought that the results of the studies converge or diverge are known for a long time -> here, the **combination of qualitative and quantitative data** seemed to be particularly desirable. Indeed, the widely exploratory nature of the works on the subject involved an open approach, **allowing the emergence of variables and relations of which the researchers were not inevitably conscious at first.**
- At the same time, it remains rather difficult to establish systematic links between variables without recourse to quantitative data. We retail successively the qualitative study, then the quantitative study before showing how we articulated these various profits in this research).
- We can also quote Greene and McClintock (1985) which define the triangulation as being "the use of multiple data sources, methods or theories in the investigation of the same phenomenon with the aim of verifying the robustness of the data processing : in particular the interpretation of the units of sens, the categorisation".

Thank you for your attention !!!

