Title of the communication: **Co-location and innovation in high-tech companies, the case of Tunisia**

**Purpose of the communication**

Since the mid-1980s, small businesses have returned to the heart of local development analysis and have begun to attract the attention of researchers and policy makers around the world. These companies create jobs, wealth and innovation. In brief, they hold the keys to economic growth in the future (Amable, 2006).

In developing countries, and in Tunisia in particular, these small enterprises operating in the field of ICT technologies should play a particularly important role as agents of industrial regeneration and technological catch-up. They are at the heart of government strategies for a "knowledge-based economy". Clusters are at the heart of these strategies for the competitiveness of companies and territories. They are considered as powerful catalysts for innovation and competitiveness.

Tunisia has deployed material, financial and institutional resources to promote the emergence of these supposedly pro-innovation environments. The creation of technoparks and industrial zones is part of this government strategy.

However, these environments are controversial, both conceptually and practically. It was first the economists who began to express their concerns about the enthusiasm of policy makers. Indeed, there is almost unanimity among the latter to consider local development and clusters as a matter of course. Second, there is not enough distance from the expected economic benefits of these policies. Thus, there is no evidence to admit that clusters promote the innovative capacity of companies.

Systematic evaluations of these impacts are then necessary. The purpose of this communication is, on the one hand, to assess the interest of high-tech companies in clustering in geographically and sectorally well-defined territories. On the other hand, to compare the factors affecting the innovation capacity of companies benefiting from a simple industrial agglomeration policy (industrial zone of the North-East of the Lake) and those benefiting from a technopole policy (Elgazala technopole).
Originality of the subject

In implementing these policies, it is to be expected that they have been illuminated by empirical studies. However, despite the existence of several studies on innovation, empirical evidence showing how firms improve their capacity for innovation by clustering remains very rare in developing countries, particularly in Tunisia. This study is a modest contribution to filling this gap in empirical research and the literature.

Methodology

The article presents a survey of 102 ICT companies. It includes detailed information on capacities and factors that foster innovation within firms as well as a wide range of external factors that may have contributed to innovation. The survey covers 58 companies located in the Elgazala technopole as well as 44 companies located in the industrial zone of the North East of the Lake, an area with high concentrations of small high-tech and software companies.

In addition to the determinants of innovation, the article proposes a comparative study between the two instruments of industrial agglomeration policy (technopole versus industrial zone) in stimulating innovation.

First, the innovation capacities of firms were linked to the determining variables by means of Chi 2 correlations in order to identify statistically significant relationships. In a second step, all the concepts were taken up in a multivariate approach (logistic regression step-by-step method) that allowed us to determine the relative importance of each of them in relation to the others. The survey is conducted through direct face-to-face interviews. These have served as valuable qualitative material for interpreting statistical trends.

Results

The results show that the companies that succeed in innovating are above all those that have relied on R&D, an information network associated with daily and usual market ideas and transactions (competitors and customers), regardless of the area studied, technopole or industrial zone.

However, the results concerning external interactions show that the companies registered in the Elgazala technopole are similar to a system of independent companies. Social and technical networks remain largely within company boundaries and there are few
opportunities for collaboration, learning and exchange with neighbouring companies and institutions. When they exist, they are most often linked to daily market transactions.

In contrast, the companies in the North-East of the Lake are similar to a community of practice that allows companies to share practices and knowledge with each other and produces informal networks, which are true generators of collective learning and contribute to a social but also institutional anchoring.

These results reveal that the local policy of encouraging local networks around companies with similar activities remains insufficient. Geographical proximity is far from systematically stimulating innovation. A local public policy is needed to create a technopolitan dynamic that stimulates innovation in Elgazala Park.

**Keywords**

Innovation, cluster, small high-tech companies, networks, Tunisia,

**Bibliography**

AMABLE B., 2006, Innovation et compétitivité en Europe, CEPREMAP doc web n° 0601, février.


