

## Introduction

The recent financial crisis and changes in the Italian industrial system show that the concept of localization/delocalization of production processes, factors of production, and markets have now very little to do with geographical/administrative borders; and this brings into question some foundations on which the quantification of economic phenomena are traditionally based. In this context, a very important element of complexity is represented by the evaluation of competitiveness.

Economic competitiveness is the object of frequent debates in the prominent national and international institutions. Problems regarding the concept and its proper measurement are not solved yet and they require a further elaboration, particularly regarding the context of analysis, the needed information and the available statistical data sources.

The literature on the subject is very extensive. Authors often take into consideration a set of indicators that are either a consequence of being competitive (growth of production, market penetration) or a cause of the competitiveness itself (investments in R&D, productivity increase, innovation capacity), drawing sometimes ambiguous conclusions. Part of this ambiguity can be attributed to the fact that it is not always clear if one refers to a micro or to a meso/macro-economic context: while at a micro-economic level the natural elementary unit of analysis is the firm (firm competitiveness), we need a systemic approach when we pass to a meso-/macro-economic level (system competitiveness). For example, firms belonging to local economic systems get a sizable part of their competitive advantages just from the context in which they operate and, hence, their competitiveness cannot be assessed disregarding the relationships with the local context. Therefore, the reference unit is not unique and the different possible definitions involve the concepts of local systems, firm networks, national economic systems: moreover, the choice of the reference level (micro,

meso, macro) has a strong effect, not only on the specification of the unit of analysis, but also on the identification of the relationships between units, time horizon, informative needs and related measurement of competitiveness. The micro, meso and macro perspectives are in some way integrated. In fact, if it is true that the competitiveness of a system largely depends on the competitiveness of the firms operating within it, it is also true that its competitiveness cannot be completely assessed by simply comparing the performance of the firms. In other words, we can say that firms and system objectives are different and they could even diverge: for example, the fact that the single firms are not competitive does not exclude that a system is instead highly competitive due to its capacity of creating new competitive firms and of expelling, at the same time, the weaker ones. Analogously, the fact that a system is able to create a high value added return does not imply that all of its firms have high returns; the returns could be compromised, for example, by an excessive financial burden. The consequence is that any proper analysis should necessarily take into consideration both aspects (micro and meso/macro). In particular, the aggregate approach (meso or macro) should face the crucial question of the reference level of analysis (firm networks, local or national system), that is which elementary unit should be considered in the analysis. In this respect, it is useful to refer to the concept of system which, as known, is based on the existence of components and relationships among components.

The definition of a system is founded on the concept that internal relationships are more important than external relationships (self-containing of the relationships). Hence, it is easy to understand how it is possible to identify minimal economic systems, characterized by common daily activities, and economic systems in which the self-containing concept can refer to common fiscal policy, industrial policy etc. Focusing on Italy, situation, the local labor systems, defined by ISTAT, seem to be the natural starting point, since they identify the minimal level at which many of the elements that influence the competitiveness of the higher level systems are born. In turn, the competitiveness of every local system is influenced by the nearby local systems and by the rules and policies adopted by the local and central administrations. In other words, if it can be affirmed that the Italian competitiveness (or the competitiveness of an Italian region) depends on the competitiveness of its local systems, it is also evident that the competitiveness of the national economic system (or regional system) has an effect on the competitiveness of the local systems that belong to it. This shows that the competitiveness of every local system depends, on the one hand, on the behavior of its internal components, and, on the other hand, on the interactions among the different territorial units, both at the same and at the higher hierarchical level.

These interactions are key factors which can explain the recent years' downturn in competitiveness for the Italian firms as well as the difference

in competitiveness we can observe in different sectors (see the Made in Italy or services vs. manufacturing).

This book aims at discussing the complex phenomenon called competitiveness from a critical viewpoint either at system or at firm level. In particular, Buzzigoli and Viviani (chapter 1) provide a comprehensive critical survey of the numerous contributions regarding competitiveness in its various aspects. Both theoretical and empirical issues are explored and discussed, with a special attention to statistical issues involved in the choice of proper informative sources, in the building of sound indicators and in the application of suitable methods of analysis.

In recent years, other than tertiarisation and reduction in firm size, substantial structural changes in the Italian economy between the last two censuses have affected Italian competitiveness. Grassini and Marliani (chapter 2) discuss the remarkable shift that occurred in the share of employment inside the industry sectors, from the production of home and personal goods towards the production of instrumental goods (light mechanics), as well as, inside the services sectors, from the production of personal services towards the production of business services in the period 1998-2004. They show a widespread decrease of labour productivity and a remarkable employment shift from industry to services. They also show that this employment reallocation across sectors had a negative effect on the performance of the whole economy: the employment share shifted towards less performing sectors. Services are mostly responsible for the presence of a robust structural burden.

Velucchi and Viviani (chapter 3) analyze the multidimensional competitiveness concept in a comparative perspective. Studies on this theme range from productivity and cost studies for specific activities and institutional analysis to general strategy papers, development plans and cluster studies. The best-known measure, however, seems to be the competitiveness index, a composite indicator ranking countries against each other according to selected criteria and proxies of competitive ability. In fact, competitiveness is a relative concept: it depends on the variables included in the analysis, on the disaggregation level, on the data sources. This chapter deals with competitiveness sensitivity and adapts a confirmatory factor analysis focusing on the economic and innovative capacity of the European regions. The results show the role of labor productivity and patenting on the regions competitiveness; in other words, the most competitive regions' are those with both high levels of economic prosperity human capital and, especially, innovative capacity.

Paniccià and Conti (chapters 4 and 5, respectively) analyse specific case studies to investigate the role of service sectors as a fostering force of competitiveness differentials at a regional level.

In particular, Paniccià (chapter 4), in his case study, analyses the interdependences in the fashion sector in Tuscany, in particular in the service

sector, using an input-output approach and the Tuscany-rest of Italy bi-regional matrices created by IRPET – the Tuscan Regional Institute for Economic Planning – for the years 1988 and 1997. He describes the level of integration within the production system showing the initial gap in 1988 and the dynamic trend over recent years of a very important sector in Tuscany (both in a territorial and sectoral perspective).

Conti (chapter 5) shows the use by Tuscan enterprises of business-related services. He analyses the main types of service used by companies, the size of the purchase markets, the criteria for choosing suppliers and the relative levels of user satisfaction, the main deficiencies encountered according to the type of service and the professional figures needed to improve the performance of the companies in the province of Florence. The investigation is based on a structured questionnaire distributed to a sample of 513 companies in the province of Florence. The paper shows that the great majority of companies in the province of Florence only require simple, standardised services, principally accounting for tax returns and tax matters in general, offered mainly by accountants and to a lesser extent by the Tax Assistance Centres. Only a tiny minority of companies buy more sophisticated services connected to business consultancy or patent law.

Finally, the last paper (Buzzigoli and Viviani, chapter 6) deals with the role of energy as an important dimension in international competitiveness. The paper aims at contributing to the analysis of interrelations between structural economic aspects and energy related issues in Italy. The focus is on the dynamic of energy intensity monitored in time, in order to catch the interaction between the economic dynamic, summarized by the value added, return and the employment of energetic resources, interpreted as a complex productive factor, integrated with the direct costs of the production process.