

## **New economy and ICTs: measuring economic growth**

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The “new economy” has been defined as the association between high economic growth rates and low inflation rates, along with the computerization as well as the globalization of the world economy (Schreyer, 2000). It follows that the role played by the Information and Communication Technology (ICT) in sustaining economic growth is a necessary condition, even though not a sufficient one, to explain the transition to a new economic order at international level. Recent studies carried out by OECD, IMF and Federal Reserve try to identify the underlying causes of the growth gap existing between the United States and the main European economies in the late 1990s. As a matter of fact, the different growth rates of the ICT-related sectors proved to be among the most important factors explaining such a gap. However, when focusing on the role played by these sectors in the diffusion of innovations, harsh difficulties arise in measuring the output of these activities as well as the input they represent for all other economic sectors.

The role of ICTs in the “new economy” has been the subject of a recent debate aimed at establishing whether and to what extent this technological change can be viewed as “horizontal” - that is, able to propagate growth in the overall economic system, thus representing a new “technological paradigm” – or, rather, if it is a more limited and sector-specific change. Most studies reveal that ICT has not only shown an outstanding dynamic as a single industry but also a great capacity of promoting growth in other sectors, both traditional and ICT-intensive.

In the “new economy” the investment behaviour of firms implies a rethinking of the technological taxonomies usually applied to industrial activities. In fact, some low- and medium-technology sectors (as measured by R&D contents) appear to be relatively more ICT-intensive than many science-based sectors.<sup>1</sup> In other terms, the relationship between the technology embodied in products and the degree of sectorial integration in the “new economy” does not turn out as crucial, since even goods produced

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<sup>1</sup> Pavitt (1984).

by traditional industrial sectors - such as, for example, textiles and clothing or printing and publishing<sup>2</sup> - can be considered as relatively ICT-intensive.

Our work aims at identifying the Italian position in the transition from the “old” to the “new economy”. We start by placing Italy in the international context, comparing its relative situation with respect to the US and, particularly, to the other European countries. We then emphasize the growing complexity of national accounts estimates arising from the necessity to grasp elements such as the speed of change, the interdependence and intangibility of economic and innovative processes. We subsequently focus our attention on the development and the diffusion of ICTs in Italy by providing an outline of the relevance and the evolution of the national ICT market during the 1990s.

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<sup>2</sup> Gambardella and Torrisi (2000).