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# GLOBALIZATION, INDUSTRIAL NETWORKS AND SERVICES

Abstract

The names given to the new phase of social and economic development reflect the different views and uncertainties related to nature of the change:: service society, information society, knowledge economy, information age, digital economy, learning economy, intangible economy, global information economy. All these characterizations have, however, the common feature of stressing globalization (or internationalization), and knowledge generation and diffusion as the driving forces in the new emerging economy. From the point of view economics and statistical measurement systems there seems to be a paradox inherent in the ongoing change - while the dependence on data and information is increasing they are becoming less reliable.

According Zvi Griliches (1995) the share of economy measured with a degree of accuracy by official statistics has fallen from 50 % to 30 % during the post war period (cf. Goldfinger, 1997a) The difficulties rise mainly due to the most dynamic parts of the economy: global business, services, and information and communication technologies (ICT). The basic issue here is the lack of coherent conceptual framework. Conventional economics and statistics have fairly little to offer for the analysis of economic development where internationalization of business, and activities related to generation and utilization of information and knowledge play a major role..

The paper discusses the internationalization of business and parallel changes in firm organization and advances in ICT. Finally, the challenges posed by these profound changes to understanding and measuring the functioning of the emerging new economy are presented.

Since the mid-1980s the value of foreign direct investment (FDI) in the world economy has increased 5 - 6-fold while the value of world trade has grown less than threefold and world aggregate output less than that. Large industrial firms in virtually all developed economies operate world-wide. For example, foreign employment of the large Nordic manufacturing firms is as high as 50 to 60 %, and some two thirds of the sales generated by these firms comes from international markets (Ylä-Anttila, 1997).

Globalization of business and rapid advances in ICTs are closely related. On the one hand information and communication technologies make it possible to effectively decentralize and

control global operations of the MNCs, on the other hand global competition is the driving force behind new innovations and rapid diffusion of ICT.

Furthermore, internationalization of business and technical progress are rapidly changing firm organization. Firms adopt new types of organizational forms to increase their competitiveness in the global market place. There is a growing amount of evidence that new technologies are more conducive to small and decentralized organizations. Economies of scale in production have become of decreasing importance. However, scale economies in R&D, financing and international operations remain important and are, partly, of increasing importance. These tendencies lead to new modes of cooperative ventures and cross-border alliances between firms. The boundaries of modern firms are increasingly blurred. The firm as a financial entity displayed by annual reports and financial statements is far from a satisfactory description of the activities and assets of the firm. Firm is a nexus of contracts (explicit and implicit) rather than a financial entity or a production unit, intellectual capital of the firm is of much greater importance than material assets reported by the conventional accounting practices.

The border line between manufacturing and services is becoming harder and harder to define, even within a firm. Large multinational manufacturing firms use less and less resources for the production of physical goods. Direct production costs are shown to be in the order of 20 to 25 % of total labor costs in large Swedish multinational manufacturing firms The rest consists mainly of various internally produced services: R&D, control and supervision, education and training, production scheduling etc. (Eliasson, 1990). This in spite of growing outsourcing of externally produced services. In the modern economy markets for all kinds of intangibles are estimated to be significantly larger and growing faster than the markets for tangible outputs and inputs (Goldfinger, 1997a).

Much more important than defining the exact boundaries of the firm or sharp distinction between industries are connections and interaction among firms and industries. The traditional input output analysis does not fully uncover the essentials of these connections the most important interconnections relate to information and knowledge flows not directly priced by the markets.

The source of economic value is no longer the production of material goods but the creation and utilization of new knowledge. Economic growth is fastest where the clustering of knowledge-intensive activities leads to positive external economies and technological spill-overs. These are not captured by any conventional measurement systems. Significant part of knowledge flows and exchange of information takes place through non-market mechanisms, although the economic value of this exchange might be large.

Since much of the information intensive inputs and outputs or intangible production and factors remain outside the current measurement systems, it is likely that there are biases in our production, productivity and inflation measurements. It has been argued for long that these biases might be fairly large and, hence, the official statistical data might have given wrong signals to the policy makers. Some recent studies seem to support these views. Consumer price indices might have a substantial upward bias, living standards and productivity are underestimated. According to Hausman (1996, 1997) the introduction of cellular phone alone has increased consumer welfare in the US by the amount which corresponds to 0.3 - 0.6 % of GDP. In spite of that cellular phone is not included in the US CPI.

It is evident that the emerging new phase of the economy is best characterized as information society or an intangible economy. Service are an essential and growing part of that economy, but calling the new phase a service economy refers too much to the traditional three sector model. What is essential in the new developments is an increasing use of intangible factors and a growing share of intangible outputs in every sector of the economy.