Chapter 19

Knowledge-Based Economic Growth from the Social Context of Information Technology

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ABSTRACT

Information systems have been touted as a key driver of economic growth in the modern world. Countries and regions alike have leveraged these powerful technologies to boost economic growth. In today’s knowledge-driven economy, information technologies are applicable to many industries as they can be harnessed to increase productivity and production. However, the ability to use these technologies to facilitate economic growth goes beyond the technologies per se. In this chapter, the author argues that the social context influences a region’s ability to create knowledge-based economic growth. Using case studies of three regions, the author argues that upskilling and isomorphism are important facets in a region’s social context that warrant consideration. The results are applicable to policy-making and contribute to the literature on social informatics.

INTRODUCTION

Along with the advent of information technology, societies are increasingly developing information industries and leveraging them for economic growth. This economic transformation from the industrial to the information and knowledge economies is characterised by the transformation of economic exchange. While land and capital were fundamental resources of production in the industrial economy, intangible information and knowledge assets are critical resources to the information and knowledge economies.

If successfully leveraged, information systems have the power to transform economic exchange and generate economic value to users and therefore,
regions. While information technology opens up pathways to newfound organisational capabilities, regions empowered with these technologies are similarly poised for growth economically. Indeed, technological advancement has been touted and shown to be an important determinant, among others, for economic growth (Denison, 1979, 1985; Jorgenson & Griliches, 1967; Kendrick, 1961, 1973; Solow, 1957). Castells argued that these technologies can possibly create an innovation-driven networked economy (Castells, 2001), which is a key driver of economic growth in the knowledge economy (Yeo & Trauth, 2009; Yeo, 2007).

The implications of information technology and systems, however, are not universal across all regions and contexts. Pacey (1983) argued that the value of technologies must be interpreted within their social contexts that have different experiences with the same technologies. Users of technologies are critical in this relationship and hence, the value of these systems only goes as far as users’ experiences go (Taylor, 1996). Extrapolating this to the societal level of analysis, regions that support the use of information technologies are better poised to create technology-based innovation, and hence knowledge, for economic growth. Social conditions constitute contexts that can influence the value of information systems. Beyond access to information systems, societies must have supportive social conditions that facilitate their leverage. It can be argued therefore, that economic growth from information systems is dependent on the social contexts within which they exist and function.

This study explores the social context that influences economic growth. Specifically, the social context in this study includes aspects of learning that enable regions to leverage information technologies for knowledge-based economic growth. Therefore, it follows that creating a supportive social context facilitates the increased use of information technologies, which drives economic development through knowledge-based growth. In the analysis, the paper also covers the theoretical implications of the findings. In the world today, income disparity is increasingly related to a country or region’s innovation capabilities (Rincon & Kadi, 2005), which is an indicator of knowledge-based production. This research is a timely contribution to the social informatics literature about how social conditions can facilitate economic growth.

LITERATURE REVIEW

Enter the Knowledge Economy

With the advent of information technologies and the continued growth of high-tech industries, countries and regions alike began to recognise the importance of knowledge work. While the information economy was driven by high-tech industries, the heart of the knowledge economy lies in continuous innovation. The knowledge economy is reliant on intangible assets that have their foundation in human capital (DeVol et al., 2004), where knowledge-based inputs are stronger productive forces than material ones (Stehr, 2002). The most technologically advanced economies are knowledge-based: they have successfully leveraged information technologies to fuel the innovation process, a key facet in the knowledge economy (Yeo, 2007).

The knowledge economy can be differentiated from an information economy. Just as information and information technologies were the main drivers of the information economy, knowledge is the engine of the knowledge economy. Knowledge industries are defined by innovation, particularly technological innovation. Hence, scholars are increasingly focusing on innovation in their investigations of the knowledge economy (Powell & Snellman, 2004). This approach allows researchers to capture the dynamism and intangible characteristics of knowledge in a knowledge economy. With the increased emphasis on innovation, education and human capital become important
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