

Chapter 24

Strategic Innovation and the Knowledge Society: The Case of Latin America

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ABSTRACT

It has become increasingly evident that knowledge is intimately associated with strategic innovation (i.e. as a deliberate action allowing the benefits arising from new technological changes to produce better conditions for being able to become part of the so-called knowledge society). Several academic studies and empirical investigations carried out by international organisms have agreed on this point. However, Latin-America (including Caribbean countries) are still far from achieving levels above the world average, there being very few exceptions which thereby seem more to corroborate the rule. One difficulty seems to stem from the low level of ICT positioning in the region's countries, as well as the lack of research and development policies and innovation strategies for improving such countries' competitiveness (and that of the region taken as a whole). This chapter proposes schemes which would provide a viable solution to the quandary which Latin-America is in.

INTRODUCTION

Rapid technological change, along with the great advances being made in information and communication technologies (ICT), biotechnology and

new materials, presents a series of opportunities and challenges for society and countries' production structure. Those countries which do not manage to adapt to the transformations imposed by new technologies, especially in industry, agriculture, health, the environment, energy and education, run the fatal risk of lagging behind in terms of

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development and welfare. In the particular case of developing countries, the so-called digital and information technological divide separating them from the industrialised world is becoming greater.

From an economic point of view, the key and repercussions on this process lie in the greater importance acquired by technology as production dynamising factor because of the changes which have been made possible regarding aspects such as the nature of the goods being produced, the markets and international competition. All the foregoing has been accompanied by (and has mainly been a consequence of) increased *technological content* of goods and services derived from scientific knowledge, advanced design concepts, intelligent materials, automation, software, advanced service concepts and medical and biological discoveries.

It is considered that innovation plays a central role in differing economic processes within the *new economics of knowledge*, as pointed out by (Garnett, R. Jr, 1999). There is evidence at macro level that innovation is the dominant factor in international competitiveness and thereby in national economic growth and determining world trade patterns. R&D (resulting in innovation) at micro level (within companies) is considered to be a factor which improves a company's capacity to absorb and exploit all types of new knowledge, not just technological know-how, thereby improving and maintaining its competitive position.

Innovation is defined broadly here as the ability to develop new and better ways to organize the production and marketing of new and better products and services (Porter, 1990; Lundvall, 1992; Nelson, 1993; Nonaka, 1994; Grant, 1996). This does not mean that cost considerations are irrelevant, but simply that combined forces of the market globalization are enhancing the real impact of knowledge as an intangible resource and learning as a production process.

Furthermore, innovations frequently occur as a result of a link interaction between multiple elements, rather than an effort of an isolated individual (Håkansson, 1987; von Hippel, 1988;

Lundvall, 1992). This fits with a Schumpeterian view of innovation as a new mix of already existing knowledge with organizing production process and entering new markets in unconventional ways by improving or redesigning goods (Schumpeter, 1934). All of this confirms not only the statement that organizations are unable to compete as lonely agents but also that a system interaction is needed in order to shape the innovation process. This is a key factor regarding the interaction of different players and regional conditions on a cluster organization.

Technological development, however, refers to activities involved in steering an invention towards having a practical use. The Green Paper on Innovation states that, "In the context of this document, innovation is taken as being a synonym for *the successful production, assimilation and exploitation of novelty* in the economic and social spheres. It offers new solutions to problems and thus makes it possible to meet the needs of both the individual and society" (European Commission, 1995).

ISSUES AROUND KNOWLEDGE BASED DEVELOPMENT AND THE ROLE OF INNOVATION

Background

Knowledge-based development has been analysed within several academic contexts. The UNESCO World Summit on Information Society (WSIS) report (presented at the 2005 Tunis Summit) stated that "Does the aim of building knowledge societies make any sense when history and anthropology teach us that since ancient times, all societies have probably been each in its own way, knowledge societies?" (UNESCO, 2005).

One of knowledge societies' central elements concerns, "*Capabilities for identifying, producing, treating, transforming, disseminating and using information* to build and apply knowledge for

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