Introduction

Rémy Tremblay
Canada Research Chair on Knowledge Cities
Télé-université, Université du Québec à Montréal
100, rue Sherbrooke ouest
Montréal, QC Canada H2X 3P2

The knowledge economy has given rise to a considerable transformation of traditional theories, or fordist conceptions, concerning economic development. Those who adopt the knowledge economy (meta)theory (e.g. innovation milieu) consider that henceforth, "knowledge" has replaced natural resources and physical work as the main economic growth tool. In other words, knowledge has become the key element of productivity (Gertler et al. 2002; Glaeser 1999).

But what is the knowledge economy? It can be defined as an inventory of the characteristic traits of the actual period called the new economy or the digital economy, which took root during the 1990s (Warf 2001). These traits include: a boom in new information technologies and communication; the rapid growth of Internet users, a growing number of companies making microprocessors, optic fibres, software, sales and advisory services, online services, and increased flexibility in the workforce.

The surge in the stock market for firms that were part of these new activities created an atmosphere of euphoria until 2001 that nurtured the impression that the world had entered a new era: strong generalized non inflationary growth, even the onset of a new long wave cycle. Is this impression credible or is it a misrepresentation of reality? We still have to stand back somewhat to take stock of whether it represents simply a picking up of activities because of favourable circumstances or a long term trend. Furthermore, it is important to be prudent because of methodological difficulties inherent in innovative technologies. Nevertheless, the debate surrounding the knowledge economy is based on an evident reality: the evolution of technology is accompanied by a transformation of methods of production via a complete renewal of infrastructures, a transformation of the products and services produced and an upheaval in the *rapports de force* in society (Castells et Hall 1994).

Moreover, the knowledge economy has obliged cities that want to be competi-

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tive to reconsider their economic development strategies. To be competitive, these cities must be able to offer firms a well-developed transportation infrastructure, affordable land, a highly skilled and motivated workforce, and, often, tax benefits. Competitive knowledge-based-economy cities are those that can quickly transform an idea or an invention into a commercial product. They must also be able to offer opportunities for very substantial venture capital, as well as business networks particularly of small and medium sized businesses (Saxenian 1994; DeVol 1999). Needless to say, knowledge cities have to attract, retain, and "produce" highly skilled labour.

Articles gathered in this special issue illustrate how complex the economies of knowledge based cities are. For example, the article on Raleigh and the Research Triangle Region (Goldberg) shows how much this world-class technopolis was, and still is, strongly connected to its research universities. This is also the case for Austin (Tu and Sui), Montréal (Tremblay and Rousseau), and Boston (Anderson) while Albuquerque (Salazar) has a smaller knowledge-based economy and depends more on military industries. The Ottawa-Gatineau high-tech sector (Tremblay) all started because of a small group of entrepreneurs who got together about thirty years ago to create what is known today as the Ottawa Centre For Research and Innovation» (OCRI). Federal laboratories also played a key role. R&D dominates in Raleigh and Ottawa but for different reasons, while Montreal has notable clusters (a vague concept) in biopharmaceutical and aeronautics. Multimedia is also an important cluster in Montreal as well as in Toronto (Britton). Seattle, a major player among North America's knowledge cities, is the home of Boeing and Microsoft (Morrill and Sommers). Atlanta possesses a well-balanced mix of clusters (Walcott). Knowledge-based cities in France are also addressed in this issue (Fache).

In conclusion, the knowledge economy and the activities that are linked to it vary greatly from one city to another. Our main purpose in drawing together the different papers in this special issue was to illustrate this reality. We hope this special issue of the Canadian Journal of Regional Science will provide a good sense of the economic diversity and challenges of knowledge cities.

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