New Opportunities for Cities in the Digital Economy

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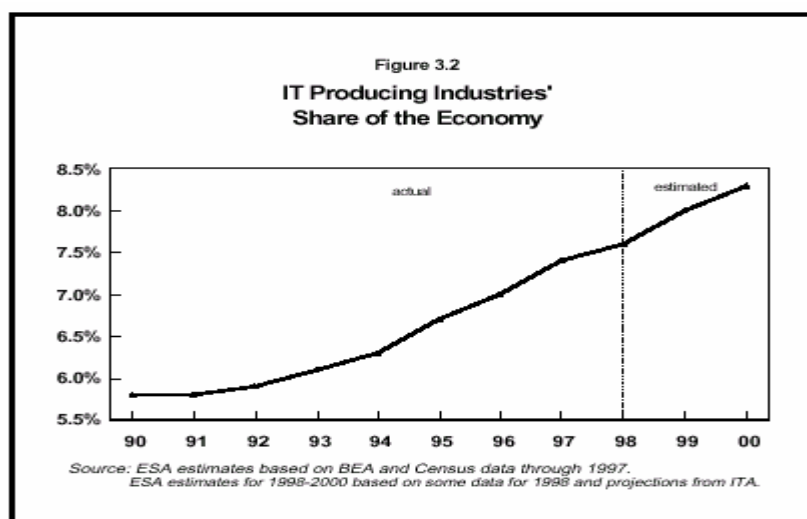
When we talk about the digital economy, we're talking about a world in which people work with their brains instead of their hands. A world in which communications technology creates global competition - not just for running shoes and laptop computers, but also for bank loans and other services that can't be packed into a crate and shipped. A world in which innovation is more important than mass production. A world in which investment buys new concepts or the means to create them, rather than new machines. A world in which rapid change is a constant. A world at least as different from what came before it as the industrial age was from its agricultural predecessor. A world so different its emergence can only be described as a revolution.
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The complex of hardware and software innovations that encompass the IT sector have made information the most important basic for creating value in the economy. The process of creating value from information, throughout and across the economy, is the ultimate basis for the digital economy.

The spread of IT innovations in the digital economy affect growth in other ways. For example, IT innovations appear to raise business investment in equipment. The last years have seen the fastest growth of business investment in equipment on record, and IT investments have accounted for almost two-thirds of that growth. The digital economy also can stimulate improvements in workers' skills, since many firms have to train their employers to use information technologies. Further, IT makers with the network effects descried above tend to be dominated by a handful of products and companies, and this tendency creates the possibility of beneficial economies of scale.

Figure 3.2
IT Producing Industries'
Share of the Economy

Source: ESA estimates based on BEA and Census data through 1997.
ESA estimates for 1998-2000 based on some data for 1998 and projections from ITA.

Perhaps most important of all, a dynamic of cascading of continuous innovations has characterized the development and deployment of information technologies in this period. Firms intent on taking advantage of innovative new technologies often have to rethink the way they operate and reorganize their operations, which can pro-

duce a round of organizational innovation. Many firms also have discovered that the new technologies can be used to develop and produce new goods or services for themselves, producing yet another round of information.

The digital economy is being shaped by developments not only in computer hardware and software, but also in electronic connectivity. Larger businesses have been increasing efficiencies through standardizing and automating routine transactions electronically for some time. Until recently, however, most small and medium sized businesses found that the costs of necessary hardware, software, and communications service for these systems exceeded the benefits.

The Internet is both an effect and a cause of the new economy. It is, in part, a product of powerful technological and economic changes that are shaping a new epoch of economic experience. However, the Internet and related networking technologies are also increasingly the new economy's medium.

Networks, like telephone networks or the Internet, are subject to a phenomenon called "network effects" or "network externalities". The value of network to participants is low when the number of participants on the network is low, but rises rapidly as network participation expands. For example, a network of a single telephone is of no use. Adding another telephone increases the value of the network because now calls can be made between the tow phones. As phones are added, the number of possible connections rises almost as fast as the number of phones. Any persons with a phone can reach more people, so the network's value to them increases.

Moreover, as the Internet gains popularity, its technological specifications have become a default standard, encouraging new hardware and software innovations that use Internet technology as a platform.

We live in an increasingly wired world. The remarkable growth of the Internet in recent years shows no signs of abating.
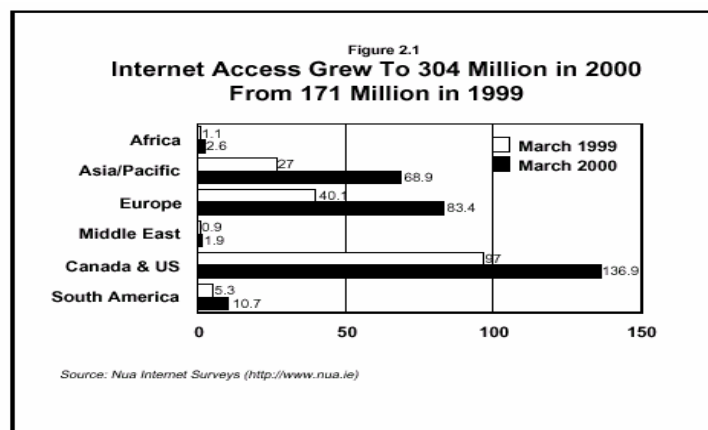

Figure 2.1
Internet Access Grew To 304 Million in 2000 From 171 Million in 1999

Source: Nua Internet Surveys (http://www.nua.ie)

Table 2.1
Number of People Online
(in Millions)

	Mar-99	Mar-00	level increase	percent increase
Africa	1.1	2.6	1.5	136
Asia/Pacific	27.0	68.9	41.9	155
Europe	40.1	83.4	43.3	108
Middle East	0.9	1.9	1.0	111
Canada & US	97.0	136.9	39.9	41
South America	5.3	10.7	5.4	102

Source: Nua Internet Surveys

The amount of information available online to people with Internet access has also grown very rapidly.

Consumers today-wherever they are in the world- go online to shop, learn about different products and providers, search for jobs, manage their finances, obtain health information and scan their hometown newspapers. While many of these activities are no captured by official output and productivity measures, a growing body of anecdotal evidence suggests that the digital revolution is improving many people's lives.

The spread of Internet access is being accompanied by a proliferation of new community spaces online. Some of these are commercial spaces such as online auctions that allow consumers to sell or trade goods services. Others are meeting spaces where individuals interact around a particular interest or topic- from chat rooms for hobbyists, and online current events discussions, to support groups for people facing similar challenges. In the process of providing for individuals to interact, these online spaces create virtual communities.

With the advance of computers and online networks - especially the internet - a new dimension of human experience is rapidly opening up. The term "cyberspace" has been mentioned so often that it may at this point seem trite and overly commercialized. However, the experience created by computers and computer networks can in many ways be understood as a psychological "space." When they power up their computers, launch a program, write e-mail, or log on to their online service, users often feel - consciously or subconsciously - that they are entering a "place" or "space" that is filled with a wide array of meanings and purposes. Many users who have telneted to a remote computer or explored World Wide Web will describe the experience as "traveling" or "going someplace. "Spatial metaphors "- such as "worlds", "domains" or "rooms" are common in articulating online activities.

Information Highways, Digital Cities, Tele-Work, Tele-Villages, Tele-Commuting, Smart Communities, Lone Eagles ... These are catch-phrases, narrowly defined categorizations that often lack appropriate understanding and contextualization of a much more broadly encompassing and effecting social transformation. We are simply, becoming an increasingly communicative and technologically mediated society. The fabric of our cities and towns is being rewoven by the digital networking and tele-mediation of global society. This "information revolution" is real. It is a force of powerful social transformation, the effects of which are barely comprehended yet. The transformation power of electrification and of the automobile on our lives over the past century only hint at the impacts and implications that the new communications technologies and services will have on the political, cultural, social, economic and physical makeup of our communities. Telecommunications infrastructure and services, purely by their nature and implementation, and at this early stage of their development and integration into society, do not assure rural or urban communities of an improved future. The issues and considerations that surround our increasingly technological and digitally communicative local-global society are complex. Some people are actively venturing into this new environment, developing "virtual realty"; treating information purely as data; a commodity to be bought and sold. Large sectors of society harbor growing fears and confusion, overwhelmed by an increasing lack of meaning and feelings of unconnectedness

Urban life will never be the same, because city residents will have been bitten by the Internet bug. The public arena will undergo revolutionary changes. As a city government, we will be facing a situation in which all residents are building their own virtual world. They will have access to all manner of information, can set up interest groups and will be able to communicate with great ease. That means that the

general public will become much more organized and influential. Local governments will need to respond to these developments for the benefit of society as a whole. The Digital Era is a challenge to the city administration, to the private sector and to all citizens. They need to work together to seize opportunities and eliminate threats.

Wilbert Stolte, vice mayor of The Hague, outlines the approach taken in The Hague said: "In the first phase of the policy making process, the local administration has mapped out a future for itself in an information-driven society. For 2009, the city envisages a situation in which the Internet has become fully integrated into daily life for the benefit of us all. The motto used in this context is, "Every resident connected!" With this motto, it is meant to say that every local resident not only needs to be hooked up to the Internet, but also needs to become fully involved in the local community."

Today, urban and rural communities are being swept up in a socio-economic transformation that is affecting the whole world. The often espoused linear progression of economic waves, from agricultural, to industrial, to information-based, is too simplistic to be an accurate assessment of human evolution. One system does not in fact, replace another. If our fundamental motivations and desires are for a healthier, more intelligent and sustainable society, then we must invest with an appropriately reconsidered understanding of economic valuation.

To get a handle on this complicated subject we have outlined five different "faces" of the city in the information society. These are:

- The entrepreneurial city
- The inspirational city
- The caring city
- The learning city
- The democratic city

The emergence of information and communications as major economic forces brings about increased complexity, choice and opportunity. Will rural towns and urban neighborhoods continue to follow and conduct business as usual, or will they emerge as example-setting shapers and beneficiaries of a new information economy?

Romania's priorities for the transition to digital economy are: the modernization of the public administration and of the public services, improvement of life standard by using information technology in fields like health, protection of environment and transports, development of the information technology sector, better work force for the Information Society, adaptation of the educational system and creation of digital content. For the accomplishment of these objectives, a series of projects with regard to facilitating the wide access to the Internet, education and continuous formation, to stimulating e-commerce, to allowing a faster access of citizens and companies to the public administration services and to speeding up transition to e-government are being carried out during 2001-2004, under Governmental coordination.

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