Chapter XIX
Measuring Transformational Use of ICTs at Regional Level

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ABSTRACT

The experience of recent years has shown that take-up of ICT, for example within strategies to implement online public services, is a necessary but not sufficient condition for making progress towards regional development goals. What is of interest is not ICT use per se, but applications of technology which exert a transformational impact on users, that is which support people, firms, and the public sector by opening up new, more effective ways for achievement of goals rather than simply making existing structures and processes more efficient. This chapter focuses on use of ICT by individuals in their roles as citizens, workers, learners, patients, consumers, and so forth. We argue that here, the transformational potential of ICTs is rooted in its effect in terms of empowerment of users, that is, “the process of granting people the power to take responsible initiatives to shape their own life and that of their community or society in economic, social, and political terms.” The chapter presents a conceptual framework for analysing ICT-enabled empowerment. It also presents some results of an Internet user survey conducted in early 2008 in 12 selected regions in the EU.

INTRODUCTION

One of the clearest challenges which Europe faces in the context of the development towards a knowledge-based society (KBS) is to improve the performance of its diverse regions. As the European Commission’s strategic framework “i2010” (CEC, 2005c) has made clear, the avoidance of a regional digital divide is desirable on the grounds of both equity (social cohesion and inclusion) and
of improving the overall economic competitiveness of Europe. It is increasingly accepted that bringing about a KBS will not be achieved by the market alone, but that policy intervention will be required in a number of areas—especially if the goal is to develop a KBS in which all participate in line with their needs and abilities.

Among decision-makers in EU regions, there is still confusion about how they can best tap the full potential of ICT and the knowledge economy. Likewise, most region are uncertain about how to react adequately to the challenges arising from recent paradigmatic developments such as globalisation, the network society and the new international division of labour, all of which are directly related to applications of ICT. Until now, most efforts by regional policy-makers have focussed on laying the infrastructure for ICT deployment, and on fostering the uptake of key ICTs such as the Internet by private households, businesses, the civic sector and government. Across the EU territory, significant progress has been made on both accounts. Most available evidence, however, suggests that the success in translating ICT investments into real progress in economic and social development varies considerably across regions. It remains a challenge to explain why this is the case, and what can be done about it. It is often assumed that such difference have something to do with the extent to which regions and their inhabitants are able to make transformational use of ICTs.

What do we mean by transformational uses of ICT? By means of a broad literature analysis, it was possible—in spite of the overall rather elusive way the term is used—to identify a number of core characteristics of ICT-enabled, transformational change (Cornford et al., 2006). “Transformational” is often understood as uses of ICT that open up substantially new ways for individuals, firms and governments to make progress in achieving their goals. In many cases, this refers to activities which would not have been possible without ICTs. In particular, three themes appear to be of key importance for the notion of transformational use of ICTs:

1. It appears that the transformational potential of the Internet, mobile telephony and other ICTs resides mainly in the way these technologies enable network creation at a scale and depth not possible before. The specific properties of networks (such as network externalities), in combination with the particularities of (digital) information goods when compared to tangible goods, imply that network creation is one of the main underlying principles for ICT-enabled, paradigmatic change. In the social domain, network creation is related, in particular, to the notion of social capital (see Field, 2003).

2. Given today’s volatile economic and technological environment, it is of key importance to recognise and react to emergent change through the ability to exploit new opportunities. This implies the key role played by lifelong learning as a continuous, often collective learning process embracing the entire population, and innovation (including social innovation) for transformational change (Tuomi, 2006).

3. Transformational use of ICTs, in particular at the level of individuals and communities, is often understood to be related to empowerment. The European Commission (CEC, 2005b) defines empowerment as “the process of granting people the power to take responsible initiatives to shape their own life and that of their community or society in economic, social and political terms” (p. 32).

In order to demonstrate the difference between transformational and non-transformational uses of ICT, it appears useful—at the risk of oversimplification—to think of ICT diffusion as a two-phase process (see Figure 1): In a first phase, ICT is adopted to better do what has been done before already, i.e. to increase efficiency (i.e. speed,
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