

# Chapter 4

## The Evolution of the Digital Divide across Developing Countries: Theoretical Issues and Empirical Investigation

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### ABSTRACT

*This chapter aims at investigating the evolution of the digital divide within a set of developing countries between the years 2000 and 2005. In doing so, it moves away from the traditional analysis of the digital divide, which compares developed countries and developing countries, and examines the existing gap within a relatively homogeneous group of countries. On the basis of the theoretical and empirical contributions from scholars in different disciplines, we select a series of socioeconomic and technological indicators and provide an empirical assessment of the digitalization patterns in a set of 51 low income and lower-middle income countries. By means of cluster analysis techniques, we identify three emerging patterns of the digital divide and derive a series of policy implications, related to the implementation of an effective strategy to reduce digital backwardness. The characteristics of each pattern of digitalization can be also usefully employed to understand whether past interventions, especially in the area of competition policy, have been successful in addressing country-specific issues.*

### INTRODUCTION

As stated in European Council (2000), in order to achieve a better economic performance it is necessary to create a society with a greater social cohesion

and less exclusion. In this respect, the diffusion of new information and communication technologies (ICT) constitutes a relevant opportunity, providing that the risk of creating an ever-widening gap between those who have access to the new knowledge and those who do not is avoided. The problem of the

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relation between the access to and the availability of ICTs and the participation in the development of the information society is widely recognised. The digital divide can be defined as “The gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICT) and to their use of the Internet for a wide variety of activities” (OECD, 2001). This definition of the digital divide concerns the accessibility and availability of information and communications infrastructure, technologies, applications and services. Some studies also focus on the conditions of accessibility and availability of appropriate content and/or of the knowledge and skills required to develop and use the services. More generally, the digital divide can be defined as “the gap between the businesses and consumers enjoying the advantages of the Information age and those still awaiting its benefits” (WITSA, 2000) or “the divide which separates the haves from the have-nots in the sphere of information” (UNCTAD, 2006). There are many studies on the issue of the digital divide in Europe and worldwide regarding the accessibility or affordability of ICT, but usually they do not consider the impacts of usage patterns and users’ choices on information exclusion boundaries. There are also many studies forecasting the number of Internet users via PC, via digital TV, or via mobile networks, but they are not concerned with the number of people who are likely to remain non-users.

Most programmes prepared by national governments and by international organizations have dedicated a substantial amount of time and financial resources to the issue of the digital divide. A large part of these proposals have concentrated on the definition of policy issues related to the digital gap, more than on the development of research projects for the assessment of its actual magnitude and for the identification of appropriate evaluation techniques. Furthermore, the digital divide has been often analyzed by comparing developed

and developing countries: the researches have underlined the existence of relevant differences between these two broad geographical areas, but have not been able to explain them in terms of different speeds of diffusion of digital technologies (Kenny, 2001). Indeed, most of the existing studies dealing with the digital gap between developed and developing countries adopt an approach according to which the digital divide tends to be largely explained by the different levels of economic, technological and social development. This type of analysis reaches the conclusion that there is the need for policies directed at reducing these differences. However, the actual implementation of specific policies in this context is quite complex, since the digital gap may be the driver, but also the result of the differences in the economic and social development. On the contrary, measuring the digital divide between countries that are quite similar in terms of economic, technological and social conditions implies that the emerging differences are only marginally influenced by other variables than those specifically related to the diffusion of the digital technologies. This allows us to understand the real meaning of the digital divide and to derive important policy implications.

This paper aims at investigating the evolution of the digital divide within a set of developing countries between the years 2000 and 2005. In doing so, it moves away from the traditional analysis of the digital divide, which compares developed countries and developing countries, and examines the existing gap within a relatively homogeneous group of countries. Starting from the background literature (section 2), we provide an empirical assessment of the digitalization patterns in a set of 51 low income and lower-middle income countries (sections 3 and 4). By means of cluster analysis techniques, we identify three emerging patterns of the digital divide and derive a series of policy implications, related to the implementation of an effective strategy to reduce digital backwardness. Section 5 will conclude and will exploit the information on each pattern of digitalization to understand whether

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