Chapter 11
Models of Economic Growth and Models of the Growth of Enterprises

ABSTRACT
This section deals with the last dimension of the AGG model—the growth realm—and the relevance of technology and innovation to this subject. This chapter discusses briefly the recent developments in two deeply connected strands of the economic literature: the complex phenomenon of economic growth (mostly of nations) and the phenomenon of the growth of enterprises, two important disciplines of the economic science. Its main intention is to highlight how the combined (and complementary) issues of the architecture design and operation and that of governance of the enterprise (objects of this book) are still absent in the mainstream debates of the growth of enterprises and of economic growth. The chapter ends with a brief discussion of economic models that take into account new information technology business models.

1. INTRODUCTION
In Sections 2 and 3 of this book the first two dimensions of the Architecture-Governance-Growth (AGG) model are presented: the architecture and the governance realms. Precisely, in Section 2 it is shown how the concept of enterprise architecture has emerged, why this is an important and indispensable concept to describe the main components of the digital (or digitalized) enterprise, and how do they interact and function.
In Section 3 it is presented some of the main aspects related to the concept of governance, particularly those related to the governance of markets and of enterprises. These aspects are central to the modern design, operation and sustainability of digital (or digitalized) enterprises, especially in terms of two dimensions suggested in this book: the corporate governance (which is treated in detail in Chapter 9) and the information technology governance (analyzed in some detail in Chapter 10).
Section 4 deals with the last dimension of the AGG model: the growth realm and the relevance of technology and innovation to this subject. The growth of the enterprise has been one of the most
Models of Economic Growth and Models of the Growth of Enterprises

widely researched topics in economic literature, and several arguments highlight the crucial importance of this field. As properly pointed out by Carrizosa (2006), some of these arguments are: a) First, enterprise growth is related to enterprise survival; b) Second, enterprise growth has consequences for employment; c) Third, associated to importance of enterprise growth is its effect on economic growth; d) Fourth, enterprise growth is a way to introduce innovation and is a leitmotiv of technological change; and, e) The evolution of the size of incumbents and new entrants determines market concentration; and, f) Moreover, a study of enterprise’s growth can shed light on the importance of the selection process after an enterprise has entered the market.

Another important characteristic of this topic, as stressed by Carrizosa (2006) is that enterprise’s growth has practical consequences for policy makers’ decisions. Enterprise’s growth can increase employment and economic activity and policy makers can control these macroeconomic variables using enterprise’s growth policies. However, as growth is heterogeneous between enterprises, it is crucial to know the internal and external characteristics of enterprises that affect their performance in the market. An ample knowledge of these features will enhance the effectiveness of public policies as well as their impact.

Therefore, this chapter discusses briefly the recent developments in two deeply connected strands of the economic literature: the complex phenomenon of economic growth (mostly of nations) and the phenomenon of the growth of enterprises, as two important disciplines of the economic science. Its main intention is to highlight how the combined issues of the architecture design and operation and that of governance of the enterprise (objects of this book) are still absent in the mainstream debates of the growth of enterprises and of economic growth. At the end of the chapter a brief discussion of economic models which take into account new information technology business models is presented.

2. BACKGROUND

In Chapter 1 of the book ‘Introduction to Modern Economic Growth’, Acemoglu (2008) begins by stating that there are very large differences in income per capita and output per worker across countries today. Countries at the top of the world income distribution are more than 30 times as rich as those at the bottom. For example, in 2000, gross domestic product (GDP; or income) per capita in the United States was more than $ 34,000. In contrast, income per capita is much lower in many other countries: about $ 8,000 in Mexico, about $ 4,000 in China, just over $ 2,500 in India, only $ 1,000 in Nigeria, and much, much lower in some other sub-Saharan African countries, such as Chad, Ethiopia, and Mali.

Later in that chapter Acemoglu (2008) asks: How can one country be more than 30 times richer than another? This authors’ answer is: “The answer lies in differences in growth rates”. And he presents a good example for that by showing the case of two countries, A and B, with the same initial level of income at some date. The author invites us to imagine that country A has 0% growth per capita, so its income per capita remains constant, while country B grows at 2% per capita. In 200 years’ time country B will be more than 52 times richer than country A. So, as the author indicates, this calculation suggests that the United States might be considerably richer than Nigeria because it has grown steadily over an extended period of time, while Nigeria has not.

After presenting further evidence for differences in income per capita and output per worker across countries today, Acemoglu (2008) shows the Agenda of his book by raising three major questions that have emerged from his brief introductory discussion:

1. Why are there such large differences in income per capita and worker productivity across countries?