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# building KNOWLEDGE ECONOMIES

ADVANCED STRATEGIES FOR DEVELOPMENT

WBI DEVELOPMENT STUDIES



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# KNOWLEDGE— THE HEART AND MIND OF ECONOMIC DEVELOPMENT

In the Mauritanian desert, a group of tourists is guided by young English-speaking, formerly unemployed graduates. They draw on the indigenous knowledge of nomads to help explain the movements of dunes, meteorological change, and archeological remains. Owing to a very efficient telecommunication policy implemented by the government, tourists are accommodated in hotels with rapid Internet connections, and this has been an important factor in their decision to come to Mauritania. Along with tourism, new activities flourish: garages for repairing the four-wheel drive vehicles that transport visitors, cultural events organized in places with ancestral traditions. These initiatives are supported by foreign investors attracted by an improved business climate.

Thus, knowledge is being put to work every day to accelerate and deepen the development process. When applied to all types of innovation, including the more modest ones in the use of basic technology, it becomes a major resource for wealth generation and job creation. Clearly, various types of knowledge, including the most traditional, can be of use; at the same time there is a need to invest in the most advanced technologies to be part of the global economy.

This book argues that whatever their level of development, countries should consider embarking on a knowledge- and innovation-based development process. In these times of accelerated globalization, “grey matter” is a country’s main durable resource. Its exploitation for economic and social well-being is increasingly at the center of development strategies.

The central role of knowledge and innovation in economic growth is widely acknowledged in advanced countries, and the experience of those that have championed this new paradigm has led to the coining of the expression “knowledge economies” (KEs). However, this notion is less widely accepted among developing countries, and the elaboration of appropriate and efficient policies for knowledge based development processes is particularly challenging in view of the more difficult political and economic environment in many of these countries. The book aims at casting some light on these issues.

*Building Knowledge Economies*, which is primarily intended for the policy-making community of developing countries, deals with advanced development strategies that focus on policies to address intangibles: education, innovation, information and communication technology, and the prerequisite economic and institutional regime—the four policy pillars alluded to in the Mauritanian example above.

## MAIN MESSAGES

**Message 1.** Knowledge and innovation have played a crucial role in development from the beginnings of human history. But with globalization and the technological revolution of the last few decades, knowledge has clearly become the key driver of competitiveness and is now profoundly reshaping the patterns of the world's economic growth and activity. Both developed and developing countries should therefore think, with some urgency, about their future under a KE heading.

**Message 2.** To become successful knowledge economies, countries have to rethink and act simultaneously on their education base, their innovation systems, and their information and communication technology infrastructure, while also building a high-quality economic and institutional regime. Policies for these four pillars have to reflect the country's level of development and will often have to be gradual. However, experience shows that some successful KE champions have been able to achieve spectacular leaps forward within a decade.

**Message 3.** Many if not most of the countries that have made rapid progress have staged nationwide KE-inspired programs of change. Such programs have been pragmatic and country-specific, yet some common points emerge: the need to promote trust and societal cohesion around the KE program; the need to work at the four pillars through a combination of top-down reforms and bottom-up initiatives; and the need for a well-communicated KE vision.

## STRUCTURE

The first three chapters respond to three basic questions of interest to policy makers in developing countries:

- Why should we invest in a knowledge economy?
- What policy steps are needed to build one?
- And how do we get from here to there—here, to understand the KE process, we highlight examples of three KE champions, Finland, Ireland, and the Republic of Korea. While these are now advanced economies, they offer a few generally applicable lessons of determination and pragmatism.

The ensuing chapters examine and document in detail the four KE policy pillars: the economic and institutional regime, innovation, ICT infrastructure, and education. The book then discusses policy agendas for selected sets of countries, ranging from the two emerging giants—China and India, to groups of middle-income countries. The focus finally turns to low-income countries, particularly in Sub-Saharan Africa.

Throughout the book, we sketch out policy principles adapted to different levels of development (that is, in high-, middle-, and low-income countries) and point out opportunities for countries to make rapid progress by “leapfrogging.” Examples from various parts of the world are provided as possible sources of inspiration for policy making communities. The main lessons of our investigation are summed up in a conclusion entitled “Moving Ahead to a Knowledge Economy.”

## INFORMATION AND ANALYTICAL BASES

The analysis and information on which this book is based are largely drawn from work by the World Bank Institute’s Knowledge for Development program, launched in 1999, which has carried out a number of KE case studies and organized KE forums in different parts of the world ([www.worldbank.org/wbi/knowledgefordevelopment](http://www.worldbank.org/wbi/knowledgefordevelopment)). Significant use is also made of the methodology and database developed by the program for appraising countries through the KE lens ([www.worldbank.org/kam](http://www.worldbank.org/kam)). In addition, a review of previous World Bank work on the knowledge economy forms the appendix to this volume.

This book is both an ambitious and a humble exercise. It is ambitious in that it promotes a new type of development strategy, covering a broad and diversified range of policies, focused on the intangible ingredients of the economic growth process. It is humble because it does not pretend to be more than an introduction to a very complex subject. In pointing out promising paths, we make no claim to exhaustiveness in our treatment of country cases, or to detailed prescriptions in the policy orientations suggested.

### Building Knowledge Economies: Advanced Strategies for Development

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