Preface

The current book focuses on the economics of knowledge and its role in generating new economic policies with the development of new paths suitable for furthering inclusive growth and development in Arab countries.

In this book, the knowledge economy is related to the globalization process that has been taking place in the world economy. The implied effects of the knowledge economy in reducing costs of trade in both goods and ideas have been highly significant and attractive for higher levels of inclusion. This has accelerated world shifts from poor agrarian-based and closed economic systems to more knowledge-based, open economies. As such, the knowledge economy is as described in different publications, composed of dimensions that allow measurements. Economic and institutional regimes, education, and innovation, besides Information and Communication Technologies (ICTs), are the main pillars retained by the World Bank for its indicators of Knowledge Economy (KE) and Knowledge Economic Index (KEI).

The present book is looking at a series of dimensions related to the knowledge economy in Arab countries with comparisons with Eastern and Central European Economies (EEE). Such comparisons are mainly motivated by the proximity to the European Union (EU) of EEE countries and their prior administrative and economic structure, which is now under transition to further globalization and to more open market economies. Inclusive growth policies appear in this book when analyzing educational attainment, feminization of labor markets, use of rents from natural resources, creation of jobs, and openness of further business opportunities, besides other dimensions such as greening the economy and furthering access to different knowledge dimensions globally and in localities.

SCOPE OF THE BOOK

The present book focuses on the analysis of Arab economies from the standpoint of knowledge and innovation. It uses Eastern and Central European Economies as comparators with the challenges they face while being assimilated into the European Union. The book is mainly based on descriptive statistics and regression analysis to characterize the knowledge economy globally, locally, and at the levels of series of sectors. A major point is related to the roles of economic rents from natural resources in shaping the current economic situation and constraining further access to the new knowledge economy. Prospects towards access to greener economies are also addressed in relation to the framework of inclusive growth. Directions for alternative economic and social policies that are more knowledge-based are also introduced.

The book considers that the knowledge economy is the underlying force of the ongoing world globalization. More practically, the development and publication of this book are motivated by the increasing need for North-South policies that account for the potential provided by the new knowledge economy. This type of research is in conformity with the international and regional trends pursued internationally for the attainment of inclusive growth besides the shifts to new development paths.
POTENTIAL USERS OF THIS BOOK

Based on the above motivations and the questions addressed, it appears that different types of users will be interested by the content of this book. Besides universities and research centers, public, private, and nongovernmental agencies can find helpful elements in this book. In relation to the material covered in this document, scientists operating in education, research, and planning are targeted as potential users. Business students, besides other scholars willing to investigate the frontiers of their own fields, are also seen as potential users of this material. Quantitatively-oriented scholars but also those who require more qualitative arguments may find promising pieces, methods, and empirical evidence in the present publication. The empirical content of each chapter and of the overall book is also attractive for policy makers at both national and international levels. While Arab countries in MENA and EEE are specifically targeted, other economies could be interested acquiring copies of this book.

I do also recognize the needs for such a book at the level of the FEMISE network and its 80 institutes and research centers that have been, over time, generating further scholarship and devotion to theoretical and applied questions concerning the Mediterranean area. Besides FEMISE, the Economic Research Forum (ERF), as it pursues complementary objectives and tasks, may identify the pertinence of this book.

I identify, on the same occasion, a series of universities in the Mediterranean region and outside it, where students and faculty are, on daily basis, struggling to keep abreast of the frontier of knowledge in this subject area. International organizations, as they are devoting efforts to promote research and development in different domains with a focus on human development, health, education, and socio-economic conditions, may find this book useful. These include organizations related to the United Nations such as the United Nations for Education, Sciences, and Culture (UNESCO); the International Labor Organization (ILO); and the World Bank. Non-governmental agencies, both at national and international levels, are largely introduced in the book chapters; they are also identified as major users that would benefit from access to the present book. The large numbers of organizations that are struggling on issues related to education, research, and human development are also seen as potential users of this book.

Examples of potential gains in knowledge from the present publication include the interdependencies of education variables, unemployment, literacy, and access to further components of the knowledge economy in the context of the Arab region. The likely gains include also the empirical findings about the linkages made between the role of rents from natural resources and the constraints facing the expansion of the knowledge economy, such as educational attainment, feminization, enterprise creation, renewable energies, and greening of the economy, besides unemployment persistence. The large arrays of benefits from knowledge-based new policies constitute also an area that might attract further numbers of readers.

GENESIS OF THIS BOOK

The genesis of this book relates initially to a research proposal submitted to the FEMISE (Foundation of Euro-Mediterranean Institutes of Economic Sciences). The core team emphasizes the roles of knowledge in driving the development of Arab economies. This led to the production of a scientific FEMISE report, FEM-35-01, released in 2013 (one year ago).

These efforts have been pursued by the placement of a request to FEMISE to produce a book under “FEMISE Edited Volumes.” The agreement is finally attained. After discussion with IGI, a contract was established for the production and diffusion of the current book that accounts partially for the content
developed in FEM-35-01. More chapters were added to ensure that the reader knows all the background information before getting to the discussion of the outcomes related to the situation and prospects of the knowledge economy in the Arab world.

STRUCTURE AND ORGANIZATION OF THE BOOK

The book is organized under four interdependent sections:

Section 1: Introduction and Methods
Section 2: The Overall Characterization of Knowledge Economy in Arab and EEE Countries
Section 3: Production, Trade, and Employment
Section 4: Economic and Social Policies for Harnessing Knowledge for Development of the Arab World

These four sections are interdependent and devoted to guiding the reader throughout the book chapters. The first section sets the main topic of the book and focuses on comparing Arab and EEE economies on the grounds of the knowledge economy. The second section is devoted to descriptive analyses and the applications of the knowledge economy measures to global, local, and regional economies with emphasis on comparisons of Arab and EEE countries. The third section focuses on issues related to production, trade, and employment. The last section is devoted to showing the likely new policies that could better guide Arab economies in further and efficient adoption of the knowledge economy.

CHAPTER SUMMARIES

Section 1: Introduction and Methods

Chapter 1 introduces the content of the overall book and its relations to similar publications on the knowledge economy in Arab countries. It is composed of two major parts, where the first one is a synthesis of the publications realized up to 2013 with emphasis on the major economic and development issues facing the economies of the Arab world. The second part introduces the rationale of the book, the new areas investigated besides the methods used and the expected policy outcomes. This book places a major emphasis on the need to accelerate the implementation of new economic and social policies that are likely to be enhancing the contributions of the knowledge economy to a more inclusive economic growth and development.

Chapter 2 introduces the major arguments for selecting EEE countries for comparisons with Arab economies. The focus is placed on the neighborhood, with the European Union and the similarities related to the transition processes experienced by EEE countries while moving form centralized and administrated to open and market-driven economies. The series of international collaborative frameworks developed with the EU, with Arab countries, and within the Mediterranean region are also among the reasons behind selecting the comparisons between Arab and EEE economies.
Section 2: The Overall Characterization of Knowledge Economy in Arab and EEE Countries

The most important avenues emphasized in chapter 3 relate to the progress in school attainment as an important indicator of the knowledge position of a country. The descriptive statistical analyses besides other assessments are devoted to show the pertinence and the importance of education attainment. Barro and Lee 1950-2010 data are used in this chapter. The opportunities lost with the low level of school attainment are introduced and discussed. The relatively slow speed of recovery in schooling is already expressed by the lowest knowledge performances achieved between the economies of North Africa, Sudan, Yemen, and the Gulf countries. In addition, the description has shown a higher attainment in schooling of EEE economies in comparison to Arab countries.

Chapter 4 introduces different knowledge components and indices and attempts to show their impacts on different economic and development indicators with focus on EEE and Arab economies. It uses mainly descriptive statistics and regression analysis to globally assess these performances. The sets of data used for EEE show already the data limitations faced by Arab economies.

In the absence of local knowledge measures, chapter 5 looks at how local universities and research centers could explain the potential for local development in territorial communities. This chapter also assesses the links between urbanization and development. It is mainly based on the review of literature, descriptive statistics, and regression analysis using data on local development, urbanization, global knowledge measures, and human development indices. The focus here is on Arab economies. The current situation and development prospects are discussed in relation to the role of knowledge economy in local development but also in further urbanization. Smart, livable, and inclusive cities are discussed.

Local and regional development is an increasingly important issue for researchers and politicians. The challenge of enhancing prosperity, improving wellbeing, and increasing living standards has become acute for localities and regions with developing economies. Moreover, questions about the implications of globalization for local and regional development in transition economies are of strong interest. Chapter 6 looks at how EEE countries have been developed at regional and local levels during the transition period and identifies some examples for Arab countries using a series of indicators and statistical methods.

Section 3: Production, Trade, and Employment

Chapter 7 introduces, respectively, the issues related to production, trade with a focus on the degrees of concentration and diversification besides the relationships to innovation, and knowledge with a focus of information and communication technologies (ICTs). The link between innovation and the value added in diverse sectors of the overall Arab economies is then addressed and discussed. Links between ICTs and other sectors are also discussed for the development of Arab economies.

As most Arab countries produce and export a large share of oil and gas to world markets, it is important to focus in chapter 8 on these sectors to find out about the economic effects on these economies. In addition, with the development of non-renewable energies and with the major debates and actions undertaken to promote greener economies, this chapter aims to characterize the main trends affecting both renewable and non-renewable energy in Arab countries. The question related to the promotion of greener activities in this part of the world is tackled through the use of Environmental Performance Index in relation to the use of energy. Promising results are attained based on descriptive statistics, trends, and
regression analyses. They show that Arab countries need to further account for the knowledge economy to diversify their use of energy and promote better environmental performance.

Arab countries face two major challenges resulting from increasing competition from the rest of the world and persistent reliance on mineral resources for their growth. At the same time, sustainable development is increasingly becoming a major concern for world development. In this respect, and from a sustainability point of view, knowledge economy opens up new and more accessible opportunities through the “substitution” of physical resources by immaterial resources. This situation raises two fundamental questions: the first one relates to the opportunity of ensuring sustainable development while the knowledge base remains rather weak and policies often shortsighted. The second one is how an integrated approach based on knowledge can strengthen existing knowledge bases and create new ones to further sustainable development. Looking at a sample of advanced countries and Arab countries, chapter 9 argues that sustainability of growth rests fundamentally on the capability of properly harnessing knowledge.

Access to knowledge economy, as well as progress in this area, is continuously assessed by the expansion of the Intellectual Property Rights (IPRs) in any economy. Development and enforcement of IPRs is likely to protect rights to innovation and creation and contribute thus to further production and use of knowledge. Chapter 10 describes how Arab countries protect the rights to innovation through patents, copyrights, geographical indications, models, labels, and other distinctive measures. Issues related to lack of enforcement and limited implementation of IPRs are not absent from Arab economies.

Chapter 11 looks at the unemployment problem in Arab economies. It shows how unemployment has been persisting during the last years with the implied risks of knowledge obsolescence and other economic and social implications. Under the absence of policy actions that are likely to reduce the effects of knowledge obsolescence, Arab economies with high unemployment rates lose in terms of competitiveness and efficiency but also in the development of knowledge economy. Special training programs, besides more business oriented educational sessions, are likely to minimize the impacts of knowledge obsolescence. Descriptive statistics as well as regressions analyzes are used to show most of the dimensions of the unemployment problem in Arab economies.

The feminization of labor markets through the role of education is among the means that enhance the participation of women to development and ensure further involvement of human resources in the growth and development processes. While this is a process that is highly pursued in most developed economies, it is not clearly seen to be pervasive in most developing countries. The Arab economies are among those countries where lower participation of women is observed but where education can be an important leverage for further feminization of labor markets. These issues are discussed in chapter 12 to underline the role of education in Arab economies.

Section 4: Economic and Social Policies for Harnessing Knowledge for Development of the Arab World

As some of the Arab countries are already facing the post-oil era in relation to the trends taking place in mining and in the oil and gas industries, with future possibilities of exhaustion of oil and gas reserves, diversification of economic activities has been emerging in some of these economies. However, the creation of new portfolios has not been expanded outside the traditional spectrum of economic activities. Besides that, governments and of public sovereign funds are still playing an important role both domestically and internationally, implying that rents from natural resources are still promising sources for economic development. This chapter addresses a series of issues related to how rents are driving
the development path in relation to access of most world countries to the gains from the new economy. It also shows how knowledge variables have been related to the rents obtained from natural resources. Finally, the hypotheses in relation to natural resources as a curse to knowledge development are tested in chapter 13.

As underlined in chapter 13, rents may reduce the capacity of Arab economies to accelerate its adoption of knowledge economy. Major imperfections in these economies at the levels of markets, governance, and enterprises are discussed in chapter 14. The limited business and enterprise creation in relation to the high unemployment of skilled labor are among the issues analyzed and discussed. As the prevailing political, macroeconomic, and business components are inter-related, imperfections are identified in almost all areas of the Arab economies. The chapter shows clearly that shifts to further knowledge economic and social policies are needed.

Chapter 15 deals with three interdependent components related to knowledge governance. The first one examines the effect of knowledge governance on medium term growth. Using the software industry as benchmark, the authors’ findings suggest that poor knowledge governance reduces economic growth over the medium term, but the relationship is non-linear. The second one analyzes the impact of formal institutions on economic knowledge and its related variables. In particular, the role of various governance indicators is examined. The results show that institutional quality plays an important role in the relative performance of MENA and African countries in building up the knowledge economy. The last aspect analyzed in this chapter is to establish the status of Arab economies in terms of their transformation to knowledge economies and empirically examine the impact of knowledge and its related variables on economic performance. Policy implications are also discussed.

Chapter 16 starts with a short literature review about the opportunities and challenges facing Arab countries. The lessons learnt from EEE countries are then discussed. A synthesis of strengths, weaknesses, opportunities, and threats to the Arab region is also introduced. Based on the conclusions from previous chapters, major inclusive economic policies are developed for the Arab economies. Furthermore, the present chapter devotes a large part to the overall economic and social policies that might be useful in generating additional insights to further the knowledge economy, social inclusion, enterprise creation, and a new environment for better well-being of the population. This could be used by policy makers to formulate coherent reforms for the sustainable development of the region based on knowledge economy principles and according to the particularities of each country and to the previous experiences of other developing countries.

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