Chapter 8
Medical Knowledge, North–South Cooperation, and Mobility of Medical Doctors

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ABSTRACT
This chapter introduces the overall context of the Millennium Development Goals (MDGs), the on-going cooperative frameworks and the triple helix approach with the support of Information and Communication Technologies (ICTs). These are devoted to accelerate the implementation of further collaboration between medical schools in both North and South of the Mediterranean area. Three important players are identified in each region. These include the medical school, the public authority, and the business related to healthcare. These players from North and South can engage in specific areas that are education, research, and development, before the identification of means and incentives to be further devoted to attract medical doctors. These collaborations follow the trends developed by international organizations, mainly the WHO. The most important conclusions attained in the previous chapters of the present book are also summarized in the present chapter.

INTRODUCTION
Besides the reasons shown in chapter XII for the promotion of cooperation between North and South, other theoretical arguments are also provided in other publications. A more theoretical contribution to the role of cooperation between two countries or regions is developed by Naiditch and Vranceanu (2013) with an original model of skilled migration, with education provided by country of origin of emigration in a game theoretical framework. Such a framework captures the migration of those with high cross-border mobility and transferable skills. These include medical doctors and others. The model suggests in general, that the cooperative framework between the two players can provide superior solutions to each of the countries.
There are series of arguments playing in favor of further cooperation in healthcare through the exchanges and mobility of medical doctors between developed and developing economies. While series of these arguments could be related to the humanistic nature of medical professions and the general willingness of the health workforce to intervene wherever it needed, they are other sets of reasons that are in favor of the mobility of medical doctors. Among these latter reasons, there is the trend of the global health system that is increasing internationally and at the level of different regions of the world. This on-going trend is led by international organizations such as the WHO and several international associations. Other reasons related to the continuous need of knowledge about series of environments with the increasing needs for both health care and pharmaceuticals. But the major reason could be the need for formal exchange between North and South about medical education and research.

An overall framework for analyzing production and diffusion of knowledge in relation to the three major players that are universities, industries and governments, is provided by the triple helix approach and ICTs. These are used to account for the new requirements of knowledge for development but also the interests of series of stakeholders. This theory and applications are for both developed and developing countries and account for series of international, national and local initiatives.

The objective of this chapter is to underline the potential frameworks that can be used to accelerate further North-South cooperation around the mobility of medical doctors. A particular emphasis is placed on MENA and Arab countries.

This chapter is composed of a literature review followed with an empirical assessment of series of cooperative frameworks with focus on MENA and Arab economies. The last part of this chapter is mainly a synthesis of the economic policies gained from the overall present book.

**LITERATURE REVIEW**

This literature review looks at the most important features that relate to knowledge production and diffusion as facilitated by the global cooperative frameworks and the support of the triple helix model and by ICTs. Applications are mainly referring to the economies of some MENA countries.

As recently suggested by the participants to the Global Health Interest Group of the Institute of Medicine (IOM), the strengthening of mechanisms to prioritize, coordinate, finance, and execute R&D to Meet Health Needs in Developing Countries, is a priority (Hotez, Cohen, Mimura, Yamada & Hoffman, 2013). This is a follow-up to the WHO affiliated consultative group on R&D. The IOM group recognizes the necessity of accounting for market failures when addressing the issues related to many diseases and health issues. They also recognize that targeted R&D is the response to advancing global health issues.

The WHO Executive Board (2013) has also urged member states to strengthen R&D in health, to promote capacity building and monitoring of health research and development.

This is introduced first as an overview followed by series of applications before focusing on its use for both global and local development in some MENA countries.

Promising frameworks have been developed to ensure that different players can have benefits from economic and social activities with high levels of interdependencies. Among these frameworks, the triple helix model constitutes an interesting model that accounts for interactions and ensures coordination of tasks. This chapter focuses on the elements of the framework but also on its applications. A special focus is placed on knowledge diffusion in MENA countries. The usefulness of the triple helix coordinating