Chapter 11
The New Economics of Skilled Labor Migration: The Case of Medical Doctors in MENA

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ABSTRACT
This is a contribution to the new economics of skilled labor emigration that focuses on the mobility of medical doctors from Middle East and North African countries. The theoretical model under risk neutrality and aversion as suggested in chapter 9 is applied. The findings show that the relative expected benefits and the emigration rate have major effects on the net relative human medical capital that remains in the source country. The effects of relative wages in the destination and sending countries besides the yield of education are likely to change the emigration patterns. Comparisons of theoretical and observed relative human capital per country averages are conducted and the statistical validity of the model is ensured. The empirical results based on the available data by Docquier and Marfouk (2006) and Bhargava, Docquier, and Moullan (2010) allow further use of the model to understand the current trends in the emigration of medical doctors. These trends confirm the magnitude of relative wages besides the level of education and the attitude towards risk as determinants of the emigration of skilled labor. The countries included in the study all exhibited brain gain from 1991-2004, but two distinct groups of countries are identified. Each country is encouraged to anticipate the likely effects of this emigration on the economy with the increase of health demand, domestic wages, and the increase in education capacity for medical doctors.

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INTRODUCTION

Within the tradition of the new economics of skilled labor migration and as a follow-up to Driouchi, Baudassé, Zouag and Boboc (2009), it has been important to update and apply the theoretical framework of the above-mentioned paper to series of sectors and economies to discuss relevant economic and social policies. As the availability of medical doctors is crucial for the provision of health care and with the low ratio of doctors to patients in most of the Middle Eastern and North African (MENA) countries, the emigration of this type of skills is critical.

The objective of this paper is to use and apply a decision model that incorporates economic, social, and behavioral parameters that may capture the emigration decisions of skilled labor with focus on medical doctors. The economic part is represented by the relative wages between destination and countries of origin, the social dimension is the education level and the behavioral component is related to the attitudes towards risk. The data used in the current research focuses on the emigration of medical doctors from each sending MENA country. It is based on Bhargava, Docquier and Moullan (2010) with its prior version as published by Docquier and Marfouk (2006).

This current article is composed of four sections. The first one is a literature review. The second introduces the decision model and its implications. The third section is mainly focusing on the model validation with applications to the countries composing the region of study. The last part discusses the overall results attained in relation to the economic and social policies in the MENA region.

LITERATURE REVIEW

The emigration of skilled labor and especially of medical doctors is an important constraint that limits the satisfaction of the local needs in health care. Several authors have analyzed these types of shortages. More recent publications are also dealing with labor shortages with emphasis on labor and health workers most of the time. Authors such as Commander, Kangasniemi and Winters (2003) emphasized that early models found that emigration of skilled labor would be harmful through the impact on wages, employment, and fiscal costs. They also showed that more recent literature has argued that a beneficial “brain gain” takes place under the effects of educational externalities. Marchiori, Shen and Docquier (2010) imply that the movement of high skilled human capital from developing to developed countries can have many positive effects. Brain drain improves human capital through ex-ante motivations to be highly educated, creates positive externality on total factor productivity by helping technology diffusion from the receiving countries, decreases information risks and triggers more foreign direct investment inflows (Marchiori et al., 2010).

However, the empirical findings of Beine, Docquier and Özden (2009) suggest that education-based selection rules are likely to have moderate impact. Bhargava, Docquier and Moullan (2010) quantified the effects of physician emigration on human development indicators in developing countries. The model used suggests a positive effect of migration prospects on medical training but the magnitude of this effect is too small to generate a net “brain gain” in the medical sector. These authors underline also that stopping physician brain drain has a small impact on human development. De la Croix and Docquier (2010) explore the complementarities between highly skilled emigration and poverty in developing countries through a model with human-capital accumulation, highly skilled migration and productivity. Their results show that two countries sharing the same characteristics can exhibit different impacts on poverty. Camacho (2010) uses a model with an economy composed of two sectors and two regions while allowing for skilled migration. The solution path attained converges to a steady state that exhibits