Chapter 9

The Theoretical Model of the New Economics of Migration of Medical Doctors

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ABSTRACT

The focus of this chapter is on the selection of the theoretical model to be used to capture the main features related to the migration decisions of medical doctors in the selected groups of countries (ECE, MENA, and EU). The selected model is consequently submitted to empirical tests, and this is shown in the following chapters of this section.

INTRODUCTION

Within the tradition of the new economics of skilled labor migration and as a follow-up to previous works, it has been important to update and apply the theoretical framework of the mentioned papers 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 introduce 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.

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This current chapter is composed of three sections. The first one is a literature review. The second one links the current theoretical model to previous ones. The last section introduces the decision model and its implications.

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 such as Qian (1994), Cooper, Getzen, McKee, and Laud (2002). Other authors that also tackled this issue include Laschinger and Finegan (2005) besides Nevidjon and Erickson (2006). More recent publications are also dealing with labor shortages with emphasis on labor and health workers most of the time (Harris, Floud, Fogel & Hong, 2010). Authors such as Commander, Kangasniemi and Winters (2004) 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 Ozden (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 a distribution of skills between regions but with no evidence of symmetry. The new steady state obtained depends on technology, fixed costs, knowledge spillovers and transportation costs.

Lodigiani (2009) provides stylized facts on the magnitude and skill composition of migration and explores the main findings on “brain drain”. It focuses also on diaspora networks and on the major channels that foster economic development in source countries of emigration. Docquier and Rapoport (2009) contribute further to the literature through adding three case studies on the African medical brain drain, the exodus of European researchers to the United States, and the contribution of the Indian Diaspora to the rise of the IT sector in India. The three cases are related to the “very upper tail of the skill and education distribution”. Their effects on the source countries exhibit mixed results. These mixed types of results are also found in Beine, Docquier and Rapoport (2009).

Grubel and Scott (1966) already said that if the human capital migration is a social cost in the short run, it is possible that this cost can, under certain conditions, be largely compensated in the long run through the transfers’ potential, and the beneficial impacts emanating from the professional networks set abroad. There are two ways