



On the optimal quality of domestic higher education programs

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Abstract

To curb the brain drain problem, a developing country may establish its own higher education programs. Assume the government imposes a uniform quality on all programs. This paper characterizes the optimal quality of the domestic program. When abroad education is prohibited, the optimal domestic program is the one comparable with the average quality of abroad programs. If abroad education is allowed, then the developing country should establish the best possible program.

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1. Introduction

Until recently most developing countries did not have their own graduate programs. For advanced study, individuals had to go abroad. Most of them chose to stay abroad beyond the completion of the program. This brain drain problem led to extensive academic research and public debates (Bhagwati and Hamada, 1974; Hamada, 1977; Kwok and Leland, 1982; Lien, 1987). One suggestion to alleviate the outflow of talent is for the developing countries to establish their own graduate programs. More specifically, if higher education is ignored then the best students may be forced to go abroad when they exhausted education opportunity at home (Lowell and Findlay, 2001). O'Neil (2003) suggested this was the case for students from Taiwan until the early 1990s. Lowell and Findlay (2001) recommended educational support and development as one of the best policies to offset the brain drain.¹ Specifically, “by improving the

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¹ Higher education plays an important role in promoting economic growth, enhancing democratic political systems. For detailed discussions, see Chapter 2 of World Bank Group (2002).

overall research environment academic institutions in migrant-source countries create opportunities that help retain would-be-emigrants from going abroad.” (Lowell, 2001). Similar suggestions were provided in World Bank Group (2001, p. 77). For example, in India, a proposal for information technology-based universities of courses to meet domestic demand was made in 2001. In Taiwan, brain drain is deemed a major problem in the 1980s. Today many Taiwanese students are unwilling to study abroad because of increased post-graduate opportunities at home and employment considerations (Liu, 2003). Instead, the current concerns are the low quality of some higher education institutions and the smaller number of students choosing to study abroad may adversely affect the knowledge transfer.

Moreover, we witness the same scenarios in many developing countries. In Turkey, the number of universities increased from 8 prior to 1970 to 71 in 1998 (Tansel and Gungor, 2002). In the Philippines, higher education enrollment grew 1.2% from 1981 to 1985 and accelerated to 6.92% from 1992 to 1997 (Alburo and Sbella, 2002). Nonetheless, the quality of these programs is a primary concern.

Due to insufficient human capital, education infrastructure, and other resources, one would expect the quality of these programs to be below average when compared to similar programs in developed countries, at least in the beginning of their establishment. According to World Bank Group (2002), the quality and relevance of research, teaching, and learning have tended to decline in these countries.² On the other hand, suppose that the government in the developing country is committed to resolve the resource problems. Is it most beneficial to establish a high quality program? How should the government choose the quality of the program? This paper attempts to address this educational policy issue.

Specifically, we construct a benchmark case where each individual with heterogeneous ability can decide whether or not to go abroad and the quality of the program should he choose to go abroad. Now, consider the case in which the government in the developing country is to establish a domestic program or multiple programs with uniform quality while prohibiting its residents from obtaining education abroad. Individuals incur smaller costs enrolling in the domestic program, as there are no moving costs and fewer language barriers. First, we characterize the quality of the program if the government attempts to maximize enrollment. It is shown that more individuals will receive education from the domestic program as compared to the case of abroad education. On the other hand, the quality of the domestic program may be better or worse than the minimum of the abroad programs that were attended by domestic residents, depending upon whether the percentage reduction in the fixed cost is larger or smaller than the percentage reduction in the marginal cost.

A more appropriate objective function is national welfare. In this case, we show that the government tends to set up a program with better quality than the average of abroad programs that were attended by domestic residents. When the saving in the marginal cost is small, fewer individuals will enroll as compared to the abroad education scenario. If the saving is sufficiently large, then there will be more individuals receiving the better quality education from the domestic program. In addition, we derive conditions under which the developing country attains a higher national welfare by replacing abroad education with its own program.

² Extensive discussions on the quality issues are provided in World Bank Group (2001) with a case study for Democratic Republic of Congo (p.21). Additional research on issues related to quality assurance and enhancement are available at UNESCO (United Nations Educational, Scientific, and Cultural Organization).

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