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Rethinking the Brain Drain

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MAIN FINDINGS

Conclusions

The migration of human capital can result in a "brain gain" to a developing country, rather than constituting a "brain drain" from the country.

Migration can confer a welfare gain not only upon the migrants but also upon the non-migrants, since the prospect of migration can induce individuals to form the socially desirable level of human capital.

The favorable effect of migration and the associated welfare gain apply also when only a subset of individuals is able to respond to the migration prospect.

A skillfully executed migration policy can confer a welfare gain upon all workers, migrants, and non-migrants alike.

For nearly four decades now, the conventional wisdom has been that the migration of human capital from developing countries to the developed countries is detrimental to the developing countries. It comes as little surprise then that the concern heretofore has been to contain the leakage. In the words of a World Development Report: “Can something be done to stop the exodus of trained workers from poorer countries?” (World Bank Development Report 1995, p. 64). This concern is in congruence with the large “brain drain” literature, and is regularly echoed by the informed press. For example, in its May 31, 2001 lead article, while advocating the entry of migrants into Europe, The Economist hastens to add: “There is a risk, especially when immigration policies target only the highly skilled, that the best talent will be drained from poor countries to rich ones.”

Research undertaken at ZEF turns this concern on its head. At the heart of this research is the idea that the prospect of migration can induce individuals to form a socially desirable level of human capital. When we refer to “human capital,” we have in mind the productive attributes of individuals that are acquired or formed either formally (for example, by attending a college), or informally (for example, by on-the-job training as a by-product of regular work). Just as physical capital is an asset that yields a flow of output, human capital is an asset, embodied in human beings, that yields a flow of income.

The point is that compared to a closed economy, an economy open to migration differs not only in the opportunities that workers face but also in the structure of the incentives that they confront: higher prospective returns to human capital in a foreign country impinge on human capital formation decisions at home. The research considers a setting in which an individual’s productivity is fostered by his own human capital as well as by the economy-wide average level of human capital. It examines the relationship between the actual formation of human capital in an economy and the socially optimal formation of human capital in the economy. It identifies conditions under which, from a social point of view, too little human capital formation takes place in the economy. It then examines the relationship between the actual and the socially optimal formation of human capital in the presence of the possibility of migration. The research identifies conditions under which per capita output and the level of welfare of all workers are higher with migration than without, and it shows that a controlled and restrictive migration policy can enhance welfare and nudge the economy toward the social optimum. It derives this result first, when all workers are alike and are equally capable to respond to the migration prospect, and second, when workers differ both in their skills and in their ability to respond. The research demonstrates that migration is conducive to the formation of human capital and thus it casts migration as a harbinger of human capital gain rather than the culprit of human capital drain. An interesting implication is that the gains from migration to the home country accrue neither from the remittances that migrants send nor

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Education is an investment in human capital.

from migrants' return home with amplified skills acquired abroad. Thus, a well designed migration policy can result in a "brain gain" to the developing country rather than in just a "brain drain" from it, as well as in a welfare increase for all of its workers - migrants and non-migrants alike.

Much of the human capital in a country is a result of decisions made by individuals. However, individual choices seldom add up to the social optimum. In particular, individuals do not consider the positive externalities that human capital confers in production. The result is that individuals acquire less human capital than is socially desirable. If individuals could be persuaded to form more human capital, the human capital in an economy could rise to the socially optimal level. What makes an unfortunate state of affairs worse is that whatever quantities of human capital are formed, some are lost through the migration leakage. Therefore, the main concern up until now has been to contain this leakage.

A well-specified migration policy can ameliorate the tendency to under-invest in human capital and permit the formation of a socially desirable level of human capital. This favorable effect of migration and the associated welfare-gain apply not only when all individuals can respond to the migration prospect but also when only a subset of individuals can. In the latter case, even those who cannot gain from migration by participating in it stand to gain from the response of others.

"Brain drain" and "brain gain"

The propensity to acquire skills is not invariant to the possibility that the skills will be highly rewarded. This consideration appears to have escaped the attention of scholars of migration for many years. They failed to notice that since the prospect of migration modifies the human capital formation calculus, migration could confer a welfare-gain upon the non-migrants. The new research draws attention to this possible relationship and shows that the behavioral response to the prospect of migration nourishes both a "brain drain" and a "brain gain," and that a skillfully executed migration policy can confine and utilize the response to secure a welfare-gain for all workers.

Details of this research were presented in the Tjalling Koopmans Distinguished Lecture delivered last year at the International Institute for Applied Systems Analysis (IIASA), Austria by Professor Dr. Oded Stark, a Senior Fellow at ZEF and a Humboldt Awardee. The text of the Koopmans Lecture was published in the first 2004 issue of World Development (Volume 32), and is freely available on the internet. ■

The Center for Development Research (ZEF) is an international and interdisciplinary research institute of the Rheinische Friedrich-Wilhelms-University, Bonn. The Center came into operation in1997.

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