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Journal of Public Economics 86 (2002) 29–46

JOURNAL OF PUBLIC ECONOMICS

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Inducing human capital formation: migration as a substitute for subsidies[☆]

Oded Stark[a,b,*], Yong Wang[c]

[a]*Department of Economics, University of Oslo, P.O. Box 1095, Blindern, N-0317 Oslo, Norway*
[b]*University of Vienna, Vienna, Austria*
[c]*City University of Hong Kong, Kowloon, Hong Kong*

Received 23 March 2000; received in revised form 27 February 2001; accepted 28 February 2001

Abstract

When productivity is fostered by an individual's own human capital as well as by the economy-wide average level of human capital, individuals under-invest in human capital. The provision of subsidies for the formation of human capital, conditional on the subsidy being self-financed by tax revenues, can bring the economy to its socially optimal level of human capital. Yet a strictly positive probability of migration to a richer country, by raising both the level of human capital formed by optimizing individuals in the home country and the average level of human capital of non-migrants in the country, can enhance welfare and nudge the economy toward the social optimum. Indeed, under a well-controlled, restrictive migration policy the welfare of all workers is higher than in the absence of this policy.

Keywords: Migration; Human capital formation; Externalities; Social welfare

JEL classification: F22; H23; I30; J24; J61

1. Introduction

There is a strong consensus that deficiency in human capital is a major reason

[☆]This is a thoroughly revised version of University of Bonn, Center for Development Research, Discussion Papers on Development Policy, Paper No. 11.

*Corresponding author.

0047-2727/02/$ – see front matter
PII: S0047-2727(01)00104-9

why poor countries remain poor. Much — though not all — of the human capital in a country is a result of decisions made by individuals. But 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 they acquire less human capital than is desirable. If individuals could be persuaded to form more human capital, the human capital that is acquired in an economy could rise to the socially optimal level of human capital. What makes an unfortunate state of affairs worse is that whatever quantities of human capital are formed, some — and often more than a mere some — are lost through the migration leakage. It comes as little surprise then that the concern heretofore has been to contain this leakage. In the words of a recent World Development Report: ''Can something be done to stop the exodus of trained workers from poorer countries?'' (World Bank, 1995, p. 64). This concern follows, and is in congruence with, the large 'brain drain' literature (for a systematic review see Bhagwati and Wilson, 1989).

In this paper we turn this concern on its head. We argue that the prospect of migration can well be harnessed to induce individuals to form a socially desirable level of human capital. Our key idea 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 they confront; higher prospective returns to human capital in a foreign country impinge on human capital formation decisions at home. We use a simple model 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. We examine the relationship between the actual formation of human capital in an economy, the optimal formation of human capital in the economy, and the public provision of subsidies for the formation of human capital in the economy in the absence of migration. We calculate the (positive) level of subsidy required to ensure that the human capital formed is equal to the socially optimal human capital. We next examine the relationship between the actual formation of human capital in the economy and the optimal formation of human capital in the presence of a possibility of migration. We state conditions under which per capita output and the level of welfare of all workers are higher with migration than in its absence. We show that a controlled and restrictive migration policy can be an effective instrument to enhance welfare and nudge the economy toward the social optimum. We derive this result first when all workers are alike and are equally capable of responding to the migration prospect, and second when workers differ both in their skills and in their ability to respond. We conclude that migration is *conducive* to the formation of human capital, and that the presence of migration can substitute for the provision of public subsidies as a means of bringing about the formation of a socially preferred level of human capital. Thus, we cast migration as a harbinger of human capital gain, not as the culprit of human capital drain. An additional interesting implication of our perception of what migration can entail is that the gains from migration to the home country accrue