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Human Capital and FDI Inflows to Developing Countries: New Empirical Evidence

FARHAD NOORBAKHSH, ALBERTO PALONI
University of Glasgow, UK

and

ALI YOUSSEF *
Helwan University, Cairo, Egypt

Summary. — Despite the dramatic increase in total foreign direct investment (FDI) flows to developing countries in the last few years, the bulk of the inflows has been directed to only a limited number of countries. It has been argued that developing countries might enhance their attractiveness as locations for FDI by pursuing policies that raise the level of local skills and build up human resource capabilities. Nevertheless, the empirical evidence in the literature in support of this recommendation for a large sample of developing countries is scant. This paper evaluates this argument in the light of the evolution in the structural characteristics of FDI and empirically tests the hypothesis that the level of human capital in host countries may affect the geographical distribution of FDI. The empirical findings are: (a) human capital is a statistically significant determinant of FDI inflows; (b) human capital is one of the most important determinants; and (c) its importance has become increasingly greater through time. © 2001 Elsevier Science Ltd. All rights reserved.

Key words — FDI, human capital, crosscountry, developing countries

If you think that education is expensive, try ignorance

From a sticker on a car parked outside Georgetown University.

1. INTRODUCTION

Since the early 1980s developing countries have significantly eased restrictions on foreign direct investment (FDI) inflows and the operations of transnational corporations (TNCs). This trend has become even more widespread during the 1990s. In fact, despite the absence of a multilateral framework for FDI, "unilateral, bilateral and regional efforts towards the liberalization of national FDI frameworks have led to a remarkable level of *de facto* convergence of government policy approaches towards FDI among countries from all regions" (UNCTAD, 1994, p. 286).

For developing countries, FDI became especially important as a source of funding in the wake of the debt crisis, given the significant reduction in the flows of official and other private capital. In an environment with more vigorous capital flows, FDI is a means to balance loan and equity capital in private foreign capital inflows. FDI is also less volatile than other types of capital flows (Chuhan, Perez-Quiros, & Popper, 1996).

FDI is not only a source of finance and employment. For developing country governments, FDI can also be a medium for acquiring skills, technology, organizational and managerial practices and access to markets. Moreover, the less developed a country is, the greater are usually the expectations it places on FDI to alleviate its resource and skills constraints. But, foreign investors are attracted to locations that offer appropriate combinations of locational advantages. Although total FDI inflows have

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spiralled in recent years, the bulk of the inflows has been directed to only a limited number of countries.

This raises the issue of whether it is possible to identify a set of policies that might enhance the attractiveness of developing countries as locations for FDI. A necessary requirement is, therefore, for policy makers to be aware of the evolution in the structural characteristics of FDI and to fully understand the changing needs of TNCs in the light of their complex global integration strategies. [1]

In this context, this paper investigates the importance of human capital as a resource that can attract FDI to developing countries. Section 2 presents the growing quantitative relevance of FDI for these countries. Section 3 analyzes changes in the composition of FDI and in the strategies pursued by TNCs. Section 4 investigates whether the empirical evidence supports the view that human capital has a statistically significant influence on FDI inflows. Concluding comments are given in Section 5.

2. FDI FLOWS TO DEVELOPING COUNTRIES

Private capital flows in the form of FDI have soared in recent years. From a yearly average of \$50 billion in 1980–84 FDI inflows jumped to \$300 billion in 1994–96. Developing countries received about 40% of global FDI inflows in 1994–96, compared to 25% in 1980–84.

Within the group of developing countries, the distribution of FDI flows varies widely both across regional groupings and individual countries, however, every developing region saw an increase in inflows. China has been the largest developing country recipient of FDI since 1992. With \$35 billion of FDI per year during 1993–96—equivalent to 35% of FDI flows to developing countries and 13% of global FDI inflows—China is the second largest recipient in the world behind the United States.

With \$68 billion on average in annual inflows during 1994–96, South, East and Southeast Asia received two-thirds of the developing-country total inflows over the same period. Excluding China, their share was 30% of the total.

Investment flows into Latin America and the Caribbean increased to a record level of \$39 billion per year during 1994–96. This amounts to 30% of all developing country inflows. This share is declining, however, from the peak of 39% in 1986. The investment stock in South, East and Southeast Asia surpassed that in Latin America in 1988 and, since then, the disparity has widened.

The absolute level of FDI flows into Africa has increased from an annual average of \$800 million during 1975–80 to an annual average of \$4.3 billion during 1994–96. This is more than a fivefold increase, compared with a 4.7 times increase in Latin America during the same period. Africa's share of developing-country inflows was 4.1% in 1994–96, the lowest share since the early 1980s. On average, Africa's share of developing-country inflows has more than halved, from 11% during 1986–90. While FDI flows into Africa have a small size and account for only a small share of flows into developing countries, their relative importance is quite high: in relation to gross fixed capital formation during 1994–96, FDI flows accounted for 7.8%. In 1996 Africa's FDI stock was 16.6% of the continent's GDP.

The increase in the share of developing countries in FDI inflows has been accompanied by a dramatic diversification in the composition of the major FDI recipients. This may reflect the existence of a wide variety of location-specific advantages over and above natural resources. Oil-producing countries are no longer important hosts. They accounted for a half of FDI flows to developing countries during 1979–81, compared to one-fifth during 1995–96.

3. FDI CHARACTERISTICS AND HUMAN CAPITAL AS A LOCATION-SPECIFIC ADVANTAGE

The rapid growth of FDI has been accompanied by significant changes in its sectoral composition as well as the relative importance of its locational determinants. Broadly speaking, until the 1950s, FDI was concentrated in the primary sector and resource-based manufacturing. The availability of natural resources was the most important host-country determinant of FDI (McKern, 1996; UNCTAD, 1998).

The relative importance of this factor has declined since the 1960s as FDI flowed into the manufacturing sector of developing countries to enter markets sheltered from international