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INSTITUTIONAL INFLUENCES ON INVESTMENTS IN DEVELOPING COUNTRIES

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The focus of this paper is on capital flows from developed to less developed countries and in particular on the question of why such flows are not much larger. I first outline the theoretical arguments with regard to such flows and then go on to review the historical evidence on international financial integration more generally. I then turn to the related literature on economic development, which over the past decade has shifted its emphasis from technology and capital accumulation per se to the underlying institutional factors that affect investment. I present evidence that such factors also affect to rich-to-poor country capital flows. Good policies - pursuit of price stability, fewer direct interventions and sound institutional structures are accompanied by higher capital flows and bad policies by lower capital flows.

I. INTRODUCTION

My focus in this paper is on international capital flows and, in particular, capital flows from the developed to the less developed countries. The emerging market countries have begun to receive such flows. The question, however, is why such flows are not both a good deal larger and a good deal more geographically dispersed. What is especially puzzling in today's context is the much greater degree of financial integration now than four decades or so ago. Adding to the puzzle is the fact - not always recognized - that at the start of the last century such flows were substantial.

In the next two sections of the paper, I outline the theoretical arguments with regard to rich-to-poor country capital flows and then go on to review the historical evidence on international financial integration more generally. To answer the question of why rich-to-poor-country capital flows have been so sparse I turn to the related literature on economic development. Here government actions, both in the sense of the day-to-day policies pursued by various government agencies and central banks and the institutions like property rights that affect the basic business environment, have come to be increasingly emphasized. I go on to present evidence that these factors also affect capital flows.

II. THE LUCAS-SCHULTZ PARADOX

Robert E. Lucas, Jr., in a well known article (1990) poses the question "Why doesn't capital flow from rich to poor countries?" It does not but should, Lucas says, since poor countries lack capital and, therefore, have both high marginal products of capital and correspondingly high rates of return to investment. Lucas cites India as a case in point. By his calculations India has a marginal product of capital that is anywhere from a high of 58 times to 5 times that of the United States, depending upon whether one allows for differences in stocks of human capital.

The paradox as Lucas states it, therefore, is that "If the neoclassical model were even close to being accurate and if world capital markets were even close to being free and complete, it is clear that in the face of return differentials of this [58 times greater] magnitude, investment goods would flow rapidly from the United States and other wealthy countries to India and other poor countries." Even if the much lower estimate of 5 times greater is more nearly correct, he goes on to say "[I] t leaves the original paradox very much alive: a factor of 5 difference in rates of return is still large enough to lead one to expect capital flows much larger than what we observe."

Two decades earlier, Theodore W. Schultz puzzled over the same question. Schultz's take on the issue, however, was not that the capital stock in poor countries was low per se, but of the wrong kind. What poor countries needed for growth were continual investments in higher quality physical capital - tractors rather than bullocks in agriculture, for example - coupled with continual investments in the human capital that would enable farmers and other workers to make effective use of the higher quality physical capital. Rates of return to investment in these higher quality inputs, Schultz argued, were high while rates of return to investment in the plentiful existing traditional inputs were low. Looked at in this way, the paradox is why inflows of funds to finance investments in the higher quality inputs were in general not being made.

III. CAPITAL MARKET INTEGRATION IN HISTORICAL PERSPECTIVE

The literature dealing with capital-market integration and with economic integration more generally is not only voluminous but rapidly growing. Three stylized facts of particular interest to the question at hand have emerged from this literature. The first is that financial integration today is much greater than it was thirty years ago and quite probably greater than even ten years ago. The second is that despite these increases it has only recently returned to the level at which it stood during the heyday of the gold standard between 1880 and 1913. The third is that the time pattern of integration has differed greatly between developed and less developed countries. A century ago, there were substantial capital flows from the developed core to the less developed periphery; today those flows are small.

Figure 1 adapted from some of my earlier work (Lothian, 2002) illustrates the first two stylized facts. Shown there is a plot of the cross-country standard deviation of quinquennial averages of ex-post long-term real interest rates for 10, and later 11, major developed countries from 1880 to 2003.

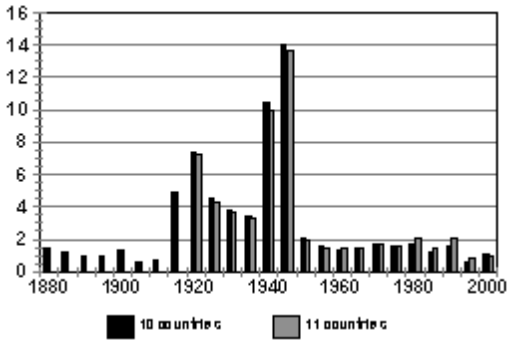

Fig. 1. Real long-term interest rates, standard deviations of 5-year averages, 1880-2000

In the standard Fisherian framework (see in particular, Fisher, 1962 [1907 original], pp. 279-280), the real rate of interest is the real rate of return on physical assets - in Fisher's terminology the "commodity rate of interest." It and the real rate of interest on financial assets are linked via an arbitrage relationship. Using this framework, we can view the cross-country differential in real returns on financial assets as being composed of two components: the differential in real rates of return on physical assets and the within-country differentials between real interest returns on physical assets and on financial assets.

During the course of the nineteenth century, these cross-country standard deviations decreased and in most instances remained low until the start of World War I. Then with the onset of the war the degree of real interest rate divergence rose dramatically. It fell off somewhat during the early Interwar Years, but then rose again during the Great Depression, and remained high throughout World War II and the years immediately thereafter. Only as the post-World War II period wore on have we seen a return to levels in the same general range as those observed under the gold standard. This tendency, moreover, appears to have strengthened in very recent years (Goldberg et al., 2003).

Figure 2 contains a plot similar to Figure 1, but for an expanded sample of 83 countries over the shorter period 1970-2003. The data again are cross-country standard deviations of quinquennially averaged annual ex-post real interest rates, in this instance, short-term interest rates. I have computed these standard deviations for four country groups: the OECD; the OECD and Asia-Pacific; the OECD, Asia-Pacific and Latin America-Caribbean; the OECD, Asia-Pacific, Latin America-Caribbean and Africa.

The first item of interest here is the increased cross-country divergence in real interest rates that results in each instance as the three non-OECD groups are added sequentially. For the OECD group the level of divergence is roughly the same as for the smaller group of developed countries in Figure 1. It then increases with the addition of Asia, increases further with the addition of Latin America and increases much further still with the addition of Africa. The second is the decline in the cross-country divergence observed for the OECD countries and for the OECD plus Asia during the last decade and a half relative to earlier. The third is the progressive narrowing of real-interest rate divergences in the case of the OECD versus Asia and the lack thereof for the OECD versus the other two groups.

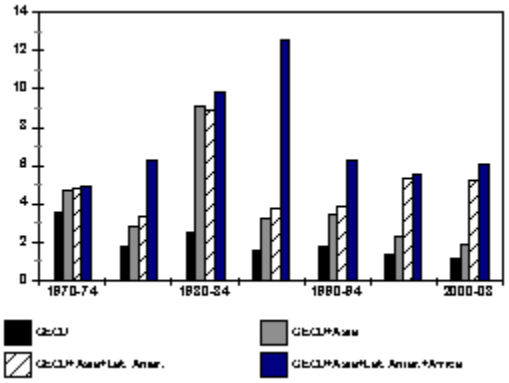

Fig. 2. Real short-term interest rates, standard deviations of 5-year averages for 89 countries, 1970-2003

The major inferences to be drawn are that integration has been, and for the most part still is, much less complete for the periphery vis-à-vis the OECD core, that this is changing for countries in Asia, and I would guess may also be changing for some countries in Latin America-Caribbean, and that it is not changing for countries in Africa. How much of this is the result of actual barriers in the form of controls of various sorts and how much is due to country risk is impossible to separate out.

Quantity data tell very much the same story with regard to recent years as the real-interest data, but a quite different story for the period prior to World War I. We can see this in Figure 3. Shown here is the distribution of gross stocks of foreign investment as shares of the total in both 1913 and 1997 for country groups arrayed according to per capita income relative to the United States. In 1997, foreign capital investment was predominantly centered in the richer countries. In 1913, in contrast, the poorer countries received a 50 per cent share of the total.

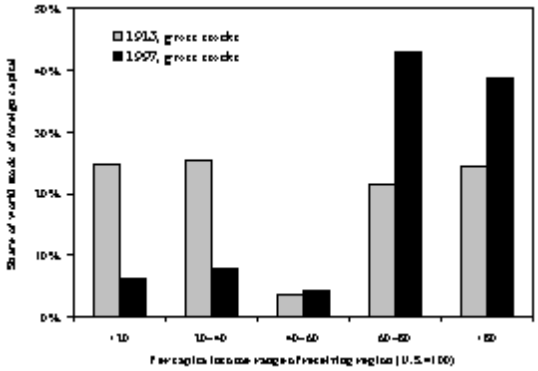

Fig. 3. Distribution of shares of world stock of foreign investment capital by level of receiving country income per capita (US=100)

IV. ECONOMIC GROWTH AND THE LUCAS-SCHULTZ PARADOX

A standard way of approaching the question of economic growth is in terms of growth accounting. The usual growth-accounting equation relates the rate of growth of real GDP to growth in two inputs, physical capital and labor, each weighted by its share in GDP. The presumption when the growth-accounting literature was in its infancy was that in the absence of measurement error, the two would fully account for real GDP growth. As it turned out this, was not the case. In most such exercises, a fairly substantial portion of real GDP growth that could not be attributed to these two factors. The part left unexplained, the residual, often exceeded the contribution of one or the other factor separately and at times the contributions of both.

Initially, explanations of what the residual represented centered around technological improvements and human capital accumulation. Later it came to be interpreted as total factor productivity (TFP).

Arnold C. Harberger (1998), like Schultz much earlier (1964), makes a powerful argument that such labels are misleading and should be replaced. A better way of viewing the residual, he states, is in terms of "real cost reduction" rather than either "technical change" or "TFP." The term technical change, Harberger says, "makes most economists think of inventions, of the products of research and development ...and of what we might call technical innovations." TFP, for its part "once purged of the changes in the quality of labor and/or the direct contributions of human capital, he said, makes one think of externalities of different kinds." Real cost reduction, in contrast, "makes one think like an entrepreneur, or a CEO, or a production manager," and hence - my phrase not Harberger's - focus directly on human behavior at the microeconomic level.

The key here according to Harberger is incentives and the government policies and the societal institutions that affect them for better or worse. Good policies - price stability, an absence of distorting government intervention at the levels of the firm and the household, open international trade and the like - and good institutions, the enforcement of private property being key - enable growth. They offer the entrepreneur the incentive to engage in activities that reduce real costs. They also raise the rate of return to investment and thus increase income via that channel. Bad policies and bad societal institutions have reverse effects.

The impact of institutional factors on growth has been the theme of a much other literature in recent years ranging from Douglass North's historical treatments (e.g., North), to DeSoto's (2000) descriptive account of the day-to-day difficulties entrepreneurs faced in developing countries, to econometric investigations of various sorts (e.g., Barro, 1998).

Let me focus briefly on one of these latter contributions since it is particularly germane to the question of interest here. This is the cross-country econometric study by James D. Gwartney, Randall G. Holcombe, and Robert A. Lawson (GHL), "Economic Freedom, Institutional Quality, and Cross-Country Differences in Income and Growth" (2004). In the paper, GHL relate economic growth to a measure of institutional quality, the Fraser Institute's Economic Freedom of the World Index (EFW) that two of the authors have compiled.

GHL use the EFW index in a series of cross-country regressions along with other variables common in the growth literature as controls to investigate its impact on both on the level of real per capita GDP and its rate of growth. They report statistically significant and economically meaningful EFW effects in both instances. These effects, moreover, become even larger when GHL take account of the influence of EFW on investment in physical and human capital.

V. POLICIES, INSTITUTIONS AND CAPITAL FLOWS

I extend the GHL approach to capital flows. Shown in Figure 4a is the distribution of foreign investment to GDP averaged to the countries' EFW score. These data, which came from Lane and Milesi-Ferretti (2001), are for a sample of 64 developed and less developed countries in the year 1997.

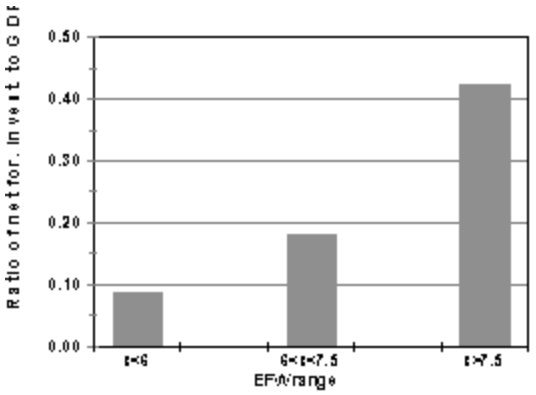

Fig. 4.a. Distribution of foreign investment to GDP in 1997 by level of EFW index

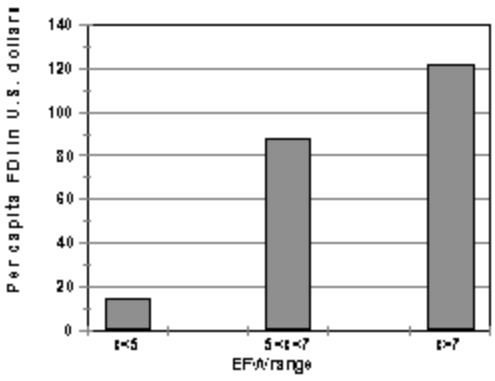

Fig. 4b. Distribution of per capita foreign direct investment in 1997-2001.

The differences among the three country groups are clearly substantial and of the right ranking, countries with higher EFW scores being the recipients of higher foreign capital investment. A regression of this measures of foreign capital investment on the EFW index reported in Table 1 shows a positive and highly significant relationship.

A potential problem with these results is separating the effects of economic development and institutional quality. One solution to the problem is to focus entirely on the less developed countries. I do this using Word Bank data for foreign direct investment (FDI) in U.S. dollars for the years 1997-2001 for a sample of 85 less developed countries, including members of the former Soviet bloc. I scaled the FDI figures by population. A frequency distribution of these data is shown in Fig. 4b. Regression results are reported in Table 1. Again the effect of EFW is significant and the broader picture painted by the chart indicative of substantial differences among the three groups of countries. The implication is clear: Good policies - pursuit of price stability, fewer direct interventions and sound institutional structures are accompanied by higher capital flows and bad policies by lower capital flows.

Table 1. Cross-country regressions: Measures of foreign capital stocks on EFW index

Dependent variable	Observa tionS	Constant	EFW	R^2 SEE
Ratio of net foreign investment to GDP	64	-.699 (-2.840)	.135 (3.736)	.184 .279
Ratio of FDI to population	84	-207.2 (-2.7100	48.5 (3.760)	.147 103.8

VI. CONCLUSIONS

Let me return to the question with which I started - why capital flows to poor countries remain so sparse. Savers in rich countries, it seems, should be taking much greater advantage of the high returns that in principle should await them. Certainly this was the case a century ago. I have argued that the reason it is not happening now is due to the institutions that are in place and the policies that have been pursued in many if not most poor countries if not continuously more than very intermittently for decades. In this regard, the emerging market countries are, I believe, the exception that proves the rule.

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