

HOST COUNTRY INCOME EFFECTS OF FOREIGN DIRECT INVESTMENT: AN ANALYTICAL FRAMEWORK

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ABSTRACT

This paper presents a framework for analyzing income effects of foreign direct investment under different environments and to contrast them with balance-of-payments effects. The results show that it is the institutional environment rather than the distributive share of product value that is responsible for adverse income effects for host countries. The paper shows that "exploitation" or "excessive profits", as is commonly understood, are neither necessary nor sufficient conditions for income effects to be negative as sometimes suspected. On an empirical level, there is a body of evidence that suggests a positive correlation between FDI and economic growth in developing countries. Yet, while much evidence indicates an one-way causality between FDI and growth, meaning FDI contributes to growth as implied in this paper, there are indications that the causality may run both ways. The evidence also appears to suggest that FDI is favorable to growth only if appropriate conditions exist in the host economy, and this includes such factors as adequate absorptive capacity and human capital, and the degree of complementarity between foreign and domestic capital.

INTRODUCTION

For several decades since the 1960's, thanks to its perceived potential to contribute to economic growth and development at home, many developing countries have made considerable efforts to attract foreign direct investment (FDI). Generally, there appears to be a growing acceptance of FDI as a catalyst or contributor to growth, especially in view of the record of

high economic achievements in the countries of East and Southeast Asia. However, the role of FDI in promoting such beneficial goals has not been without controversy. For example, the 60's and 70's saw FDI in a more controversial light, perhaps mainly because of negative assessments of the role of transnational enterprises (TNEs) in developing countries (LDCs). TNEs, of course, are the main international carriers of FDI. A number of scholars viewed the role of TNEs as agents of the industrial advanced economies bent on exploiting cheap labor and resources in the LDC, thus benefit the economy of the "core" (industrial) economies, ordinarily at the expense of the "peripheral" countries (i.e., the LDCs). This view reflects the central thesis of the "dependency" school, which is concerned with the negative political and economic impact of neocolonialism and imperialism on the LDCs (Prebisch, 1959; Frank, 1967). The dependency thesis was among the first to be critical of FDI in the LDCs, but there were other criticisms. For example, one controversial aspect of foreign direct investment (FDI) in less developed countries relates to the unqualified notion that a foreign firm can somehow appropriate more income from a host economy than it helps generate there. Unfortunately, this unqualified contention concerning negative income effects has often been based on the "wrong" reasons such as "exploitation" or "excessive profits". Other sources of confusion concerning income effects of FDI can be traced to the issues of domestic requirement and balance-of-payments (BOP) effects.

It can be shown that under competitive conditions, FDI contributes positively to a host country's national product. The much maligned factors such as foreign "economic exploitation" or "excessive profits" do not by themselves lead to adverse income affects. Rather, the conditions that allow negative income effects to exist have usually been created by recipient countries' policies. Although the theoretical possibility of adverse income effects has been raised in past studies (Reuber, 1973; Bos-Sander-Secchi, 1974), the conditions and mechanism for such an occurrence have never been scrutinized. This paper constructs a simple theoretical frame work for analyzing direct economic impact of FDI on a host country, focusing on the contribution of income to the host economy. A better understanding of such a mechanism is essential because it has important policy implications. The

presence of price distortions-whether inherent or policy-induced-in many developing countries today is a reminder that policy makers may be oblivious to the problems associated with distorted prices. Price distortion is an important issue in this paper; its meaning and implications will be explored more fully at a later stage. Finally, this paper will look at the more recent empirical works to gain a deeper perspective regarding the results of the analytical framework presented in this paper.

LITERATURE REVIEW

The literature critical of FDI in developing countries is voluminous but for the most part appears to have overlooked kind of issues raised in this paper. There is a substantial body of thought-loosely assembled under the broad banner of "dependency" school-that argues that FDI benefits the core industrial economies at the expense of the peripheral underdeveloped countries. The major argument of the dependency thesis is that FDI had tended to freeze the economic structure in the LDCs, creating a lopsided structure the prominent feature of which is localized industrialization in enclaves, where FDI takes place, and complete lack of integration with the rest of host economies. In short, according to the dependency school, in the long run, FDI tends to impede economic growth and development of recipient economies. Although underdeveloped countries lack capital and industrial technology, they are rich in natural resources and inexpensive labor. But while income or wealth is created in the periphery, including Latin America, it does not lead to an accumulation of wealth that would benefit the host economy. On the contrary, this wealth is transferred to and accumulated in the core countries because it is the TNEs rather than the indigenous people that have control over them. Consequently, the core stands to benefit from this structural dichotomy of the host economy because the foreign sector (i.e., the sector associated with FDI) does not benefit the rest of the host country because of lack of integration. Therefore, the argument runs, it is in the interest of the core countries to keep the periphery underdeveloped and dependent on the core.

However, the dependency school has left some major questions unanswered: does the accumulation of wealth in core countries depend on their ability of to appropriate more income from host countries than the income they bring in or help generate there? Does foreign economic "exploitation" as commonly understood lead to adverse income effects? Under what condition can negative income effects come about? These are the kinds of issues that this paper intends to explore. Additionally, while the dependency thesis deals with macro and structural impacts, this paper approaches the income effect issue from a micro perspective.

Singer (1950), in a pioneering work on economic effects of FDI on pre-industrial economies, based his arguments essentially on "price" effects or terms-of-trade effects. He emphasized the mechanism for distribution of income between home and host countries arising from trade between primary commodities and manufactured goods. Singer argued that the benefit of higher productivity in the foreign sector has typically been passed on to core countries in the form of low costs of foodstuff and raw material, while the cost in terms of deterioration in the terms of trade has typically been borne by LDCs. Put differently, an underdeveloped host country sells its products at low prices and pay higher prices for their imports of manufactured goods from the industrial countries. Further, Singer saw the dichotomy between foreign and domestic sectors of the host economy as the most damaging structural effects of FDI.

MacDougall (1960), on the other hand, used marginal productivity theory to analyze income effects and assessed the balance of costs and benefits accruing to the different sectors of the host economy. Fundamentally, MacDougall's work was an income distribution analysis based upon the assumption of perfect competition. According to MacDougall, while the capitalist sector in the host country suffers a loss of income because of decreasing marginal productivity of capital as the capital stock in the host country increases thanks to foreign investment, the labor sector in the host country benefits from higher wages because higher marginal returns to labor there. Since the gain to the labor sector exceeds the loss to the capitalist sector, it follows that FDI yields net positive income effects to the host country. One limitation in MacDougall's analysis is that

it is based on the assumption that FDI takes place in the traditional sectors such as production of primary commodities or basic industrial manufacturing. This assumption can lose its significance as FDI activities began to venture into new sectors that are technology or knowledge-based or into more modern capital-intensive manufacturing. Under these circumstances, decline in capital productivity needs not be a realistic consideration.

In any case, MacDougall's conclusion was based on competitive conditions in the labor and goods markets in the host country. It was not until much later that income effects under imperfect conditions were explored (Reuber, 1973; Bos-Sanders-Secchi, 1974; Vaitsos, 1974; Lall and Streeten, 1977; Biersteker, 1978). Although these works raised the possibility, or even likelihood, of adverse income effects, their approach has been basically macro. The work by Bos, Sander, and Secchi (1974) comes closest to addressing adverse income effects from a micro perspective but it does not offer a systematic framework for assessing the problem at hand. The present study seeks to extend their work.

Some recent theoretical works on FDI-Growth relationships have tended to focus on broader welfare implications or effects of FDI on specific variables such as capital formation and private consumption in the recipient country. For instance, using a neoclassical growth model, a study shows that while the impact of capital inflows on growth is inconclusive, the impact on domestic capital stock and consumption is favorable (Chow and Zeng, 2001). Theoretically, FDI is also found to be capable of decreasing host country's national welfare because of the effect of transfer of returns of capital to foreign firms (Reis, 2001).

Inability of the orthodox dependency school (Frank, 1967) to explain growth in Latin America and other LDCs has led to the emergence of "new dependency" school (Farmer, 1999). The main idea of the new school is that, despite dependency, growth in host countries is possible because the interest of the TNEs is consistent with such growth (Cardoso, 1973). As discussed below, although the empirical studies in the 1980s and 1990s do not find an unambiguous correlation between FDI and economic growth in LDCs, there has been a trend toward a more realistic re-appraisal of the role of FDI in LDCs.

This revaluation was prompted by the ever expanding FDI activity in developing countries and the record of high economic achievements in some countries in Latin America and the Pacific area.

THE MODEL

Direct Income Effects

In this standard neoclassical framework, the foreign firm is assumed to be a single-product firm that employs only one factor input such as raw material, procured locally. External and linkage effects will be ruled out so that only first-round, direct income effects will be considered. Further, it is assumed that initially the firm pays no taxes to the host government and receives no subsidies in any form. This firm sells its product and buys its factors under competitive conditions, and the prices of final goods and foreign exchanges reflect true scarcities. It produces output Q , utilizing both foreign factors (assigned subscript f) and domestic factors (without subscript). The production function, assumed to be well-behaved, can be written as

$$Q = f(K_f, M_f, M, L, I), \quad (1)$$

where K : Capital, M : Management, L : Labor, and I : Material Input. Assuming that the production function displays constant returns to scale and the factors are paid according to their marginal product, then by Euler's theorem, the distributive factor shares are given by

$$Q = k_f + m_f + k + m + l + i \quad (2)$$

where $k_f = \frac{\partial Q}{\partial K_f} K_f$, $m_f = \frac{\partial Q}{\partial M_f} M_f$, $i = \frac{\partial Q}{\partial I} I$

The value added associated with the firm's production can be derived from (2) as

$$q = Q - i = k_f + m_f + m + l \quad (3)$$

Results under Competitive Environment

The firm's contribution in real terms to the host country's income can first be approximated by B as follows:

$$B = m + l = q - (k_f + m_f). \quad (4)$$

The derivation of B is based on the conditions that (1) there is no displacement or preemption of indigenous firms, (2) domestic factors have no alternative employment opportunities, and (3) all payments to the foreign factors are not spent or reinvested in the host country. However, to the extent that the domestic factors have an opportunity cost, their income earned in an alternative domestic employment must be deducted from B to yield a correct measure of direct income effects of FDI. Simply stated,

$$b = (m - m') + (l - l') \quad \text{or} \quad (5)$$

$$b = (q - q') - (k_f + m_f), \quad (6)$$

where b: real income effects of FDI, and k' , m' , and l' are, respectively, the alternative earnings (i.e., opportunity cost) of domestic management and labor, and $q' = m' + l'$. Thus, given the rewards to the domestic factors (i.e., m and l), under competitive conditions, income effects of FDI depend crucially on the value of the earnings foregone. Here, three cases can be distinguished. First, if the total opportunity cost q' is zero, the net contribution to the host country's income, b , reaches a maximum. Secondly, if the total opportunity cost is equal to the total payment to the domestic factors, net income effects of FDI are nil. Thirdly, if the total opportunity

cost is less than the domestic factors' earnings but greater than zero, the value of income effects lies between zero and a maximum. Thus, according to this model, as long as domestic factors seek to maximize income under competitive conditions, there is no need to be concerned about negative income effects.

Additionally, if exploitation is defined as underpayment to the domestic factors using their marginal productivity as the basis for compensation, nothing in (5) suggests that exploitation results in negative income effects. To the host economy, the direct benefit of FDI depends solely on the difference between m , l , and m' , l' , respectively, and while a foreign firm can manipulate such factors as k , m , and l , to its advantage (i.e., to exploit), it normally cannot control the m' , and l' . Ordinarily, the opportunity costs of the local factors are a function of the economic conditions prevailing in the host country. Therefore, from the viewpoint of production and generation of income by the foreign firm, the variables m' , and l' should be considered as being determined exogenously. The fact that the domestic factors are willing to work for the foreign firm after comparing m with m' , and l with l' , implies that the real value of the former must be at least as high as the latter. Hence, under competitive conditions, "exploitation" as defined above cannot result in adverse income effects as suspected.

According to the results obtained in equation (5), for the same values of m and l , the smaller the values of m' , and l' , singly or in combination, the greater the value of b . This means that income benefits to the host economy vary positively with the level of local unemployment. This is because the higher is the level of local unemployment, the lower is the opportunity cost associated with the domestic factors (that is, the lower the value for m' and l'), hence the difference between m and m' , and l and l' will be greater. If, as is generally true of many developing countries, the phenomenon of underemployment or disguised unemployment is extensive, income benefits of FDI tend to be underestimated by not taking that phenomenon into account. In short, as long as workers have some choice regarding the type of work and whom they work for, and as long as competition exists in the wage structure, the presence of unemployment cannot cause income effects to be negative. Under these circumstances, more income and more jobs mean

one and the same thing. This result will not be reversed even if the foreign enterprise is a monopsonistic employer. We have already shown that underpayment to the domestic productive factors (e.g., workers) does not alter the outcome indicated in equation (5) because the crucial element is the opportunity cost of these factors and not just how much they are paid by the foreign firm.

Finally, there is the question of determining preemption or displacement effects. In this case, to assess income effects of FDI, one should compare income effects associated with the foreign firm (i.e., b in (6)) with the net income (value added) that would have been generated by the displaced domestic firm. Conceptually, one knows that if the outputs (Q) of the foreign firm and the supposedly displaced domestic firm are identical, real income effects of FDI are definitely negative because there is no transfer of income or profit associated with a domestic firm (i.e., $k_f = m_f = 0$). Beyond that, however, it is virtually impossible to make a comparison because one would not know the relative size of the foreign compared to the displaced firm or, indeed, whether displacement occurs at all. The argument that FDI, through its displacement effect, may hinder the development of local entrepreneurship in the long run may or may not be a valid one, but this issue is distinct from that of direct income effects examined here. Biersteker (1987) presented an empirical investigation of displacement of indigenous firms and markets by multinational firms in Nigeria. The study found no widespread pattern of displacement of existing Nigerian firms or markets, but preemptive displacement was a more serious matter.

In short, in the absence of price distortions and adverse displacement effects, income effects associated with FDI would be positive even if all the payments to the foreign factors are remitted. However, if a fraction α ($0 < \alpha < 1$) of those earnings is spent on the local economy on taxes or consumption or reinvestment, then real income effects should be adjusted upward as follows:

$$b = (m - m') + (l - l') + \alpha(k_f + m_f) \quad (7)$$

Results Under Imperfect Conditions

If nominal market prices deviate from true resource costs to society, then clearly the real value of income repatriated by the foreign firm is different from its nominal value. Distorted prices, such as when the exchange rate of the domestic currency is overvalued, may enable a foreign firm to transfer more real income abroad than the net (i.e., value-added) income associated with FDI, resulting in negative income effects for the host country. The proof of that proposition is rather straightforward. Let the foreign currency be e and the domestic currency, p . Then $p = re$, where r is the true, undistorted exchange value of the domestic currency expressed in terms of the foreign currency. In case of overvaluation of the domestic currency, $p = \beta re$, where $1 < \beta < +\infty$. Assume the foreign earnings T ($T = k_f + m_f$) are repatriated, then the real value of T measured in the foreign currency e is βreT . Since $\beta reT > reT$ by the factor β , it follows that the foreign firm may be able to appropriate more real income than is generated in the host economy. This, then, is a possible mechanism that makes negative income effects possible. For example, if in the rather extreme case where the income benefits in the absence of distortions $b = (q - q') - T = 0$, then with distortions, $q - q' < \beta T$, which means that, by (6), income effects $b < 0$.

So, theoretically, adverse income effects is conceivable in the possible, albeit unlikely, event that a host country has an overvalued domestic currency when it seeks foreign investment. Other things being equal, currency overvaluation tends to discourage FDI, so if a country deliberately sets out to attract FDI, theoretically it should not allow that to happen. However, domestic political or social reason sometimes overwhelm economic rationality, and as a result, some LDCs may have an overvalued exchange rate. Further, we have seen leaders in developing countries subsidize imports by allowing overvaluation to benefit themselves or to keep their constituencies or supporters happy.

In addition to exchange rate distortions, one should also add other kinds of distortions commonly associated with FDI and import-substitution policy. Although these types of distortion have no direct bearing on income

effects of FDI, it is inefficient and had negative welfare effects on society. For example, selective tariffs can be used to keep out the imports that compete with FDI-created products. The incentive to discourage import of final goods is even stronger if the leaders or government in the host country have an investment stake in the FDI as, in the case of joint ventures between a host government and foreign enterprises. In other word, efforts to attract FDI may be accompanied by a policy (e.g., import-substitution) that would have adverse welfare consequences. Since a foreign firm cannot appropriate more than the total income it generates as shown earlier, if net negative income effects result because of price distortions, the part of real foreign income transferred that is in excess of the income generated locally must of necessity comes from somewhere else in the economy and not necessarily from the operation of the foreign firm.

Balance-Of-Payments Effects

While the issue of income effects deals with the difference between the value added by a foreign enterprise and what would have been generated in its absence, BOP effects are concerned with the net balance of credits and debits on the external financial position of a country. The fundamental distinction is that while income effects are concerned with the generation of additional income, BOP effects focus on the generation of additional claims on foreigners, especially in the form of foreign exchange earnings. For a country facing foreign exchange constraints in its growth path, the BOP effects may, therefore, be of greater significance than income effects. The prominent terms in the income effects equation are primarily those that influence the nature of production and, more importantly, distributive shares, whereas in the case of BOP effects, the key variables are those that govern inter-country exchanges of financial claims. Therefore, an accurate assessment of BOP effects has to take into account not only the direct financial consequences of the initial capital investment and subsequent repatriations of foreign incomes but also the indirect financial consequence of activities related to or induced by the initial investment project.

From the viewpoint of income effects, the disposition of the output stemming from FDI -whether destined for domestic consumption or export-does not affect the contribution of FDI to host country's income. But naturally the same cannot be said of BOP effects. In the absence of export of final products and import of intermediate inputs, as a first approximation, BOP effects can be stated in the present context as

$$P = sK_f - \epsilon(rk_f + rm_f) \quad (8)$$

where P stands for the BOP effects, s , the price of the initial foreign capital K , r , the shadow price of the output share accruing to foreign capital, k_f , and to foreign management, m_f , and $0 < \epsilon < 1$. Here, k_f includes such items as fee and royalty. Assuming that the capital inflow sK_f and the income outflows rk_f and rm_f occur during the same year, the overall BOP effects for that year can be zero, positive, or negative, although the effect on the current account is negative as shown by (8). The effect on the current account may be positive only if the product associated with FDI is exported. Thus when, FDI involves import and export activities, BOP effects must be amended in terms of this model as:

$$P = [(\alpha tQ + \beta tQ) + (sK_f)] - [(\delta tQ) + \epsilon(rk_f + rm_f) + (\lambda tb)] \quad (9)$$

where t represents the shadow price of output Q , and $0 < \alpha < 1$, $0 < \beta < 1$, $0 < \delta < 1$, $0 < \epsilon < 1$, and $0 < \lambda < 1$. The first two terms, αtQ and βtQ , capture, respectively, the effects of export generation and import savings (i.e., trade effects), expressed as a fraction of the market value of the total output Q . The term δtQ stands for the foreign exchange cost of importing equipment and other inputs, again expressed as a fraction of the value of Q . The last term λtb measures the additional imports induced by the favorable income effects of FDI discussed above, namely b .

Unlike the predictability of (positive) income effects under competitive conditions as suggested by (5) or (6), nothing definite about the overall payments effects can be said even for the short run because the sum of the "capital outflows" in the second part of the equation (9) $[(\delta tQ) +$

$\epsilon(rk_f + rm_f) + (\lambda tb)]$), may or may not exceed the sum of the "capital inflows" in first part $[(\alpha tQ + \beta tQ) + (sK_f)]$. However, in the short run, the effect on the current account may very well be positive if the value of export generation and import substitution exceeds the sum of the repatriated foreign earnings and import of intermediate goods. The same can also be said of the long run, assuming that the value of induced imports λtb remains sufficiently low.

But the concept of the overall BOP effects associated with a given FDI project becomes less meaningful in the long run. This is due to two main reasons. One is that the flows of resource or claims appear on different accounts of the BOP and the other is that these flows have different time dimensions. For example, while the capital inflows associated with the initial investment (sK_f) may be a one-time phenomenon, trade effects $(\alpha tQ$ and $\beta tQ)$ and profit remittances $(rk_f$ and $rm_f)$ are bound to continue for many years after the initial investment. Further more, except for the long term capital inflow sK_f , which appears on the capital account, the remaining terms in (9) basically impact the current account. Another conceptual problem relates to the treatment of re-invested earnings, which should be considered as new capital inflows yet do not appear as such in BOP statistics. Also, if an FDI causes a displacement or preemption of a domestic business, then one must subtract the BOP effects of the displaced firm from P in (9) above.

In short, income effects and payments effects share one common characteristic, namely that over the years the problem of attribution become more and more intractable because in each case the effects will continue long after the initial act of investment. But while such a spreading over time has a clear impact on BOP effects and their measurement, it has no direct relevance to income effects in the sense that the latter is not so much a function of time as of the economic environment, in which the crucial factor is the presence or absence of appropriate mechanisms for siphoning off more income than was earned by the foreign firm according to its marginal productivity. If there are no continuous infusion of external capital and export of the final product, then in the long run, BOP effects tend to be negative because of the continuous stream of income/profits remissions. This may lie at the root of the confusion regarding negative income effects. But the possibility of long term adverse BOP effects does not imply that income

effects are negative for the same reason that foreign income/profit will continue to be repatriated over the years. While in the long run, the operation of a foreign firm can create a continuous flow of debits without creating an offsetting flow of credits, which would cause unfavorable BOP effects, it apparently cannot create a stream of incomes going to the foreign factor owners without simultaneously creating a stream of incomes going to the domestic factor owners as well.

Further Elaborations

Dropping the linearity or homogeneity assumption about the production function will not fundamentally affect the conclusions reached earlier. This is because while the form of the production function may affect the relationship between output and the distributive shares, it has nothing to do with the institutional environment or transfer mechanisms in the host country. So, neither linearity nor homogeneity has anything to do with the displacement effect or the opportunity cost of the domestic factors.

For example, suppose that the production function is homogeneous of degree n , where

$0 < n < +\infty$, and $n \neq 1$. The effect this would have on the model is on equation (3), which now becomes $q = nQ - i$, while leaving (5) and (6) unchanged. The only implication of changing the linearity assumption is that if the factors are paid by the value of their marginal product, the total product will be under-exhausted ($n < 1$) or over-exhausted ($n > 1$) by all the factor payments. All this means is that the foreign firm may enjoy more or less profit, but that is not the source of negative income effects.

Like any other productive activity, FDI undergoes changes as well as causes changes in the other sectors of the host economies. Basically, secondary effects of FDI can be grouped under two main categories, namely, linkage effects and external effects. The first refers to the vertical creation of supply of inputs to the foreign firm (backward linkage) or demand for the foreign firm's output for use as an input by a domestic firm (forward linkage). These secondary effects are very difficult to measure accurately, but the general principle can be simple. For example, let $\sum e$'s be the sum of all the

benefits (economies) and $\sum d$'s, the sum of the costs (diseconomies) associated with secondary effects (both costs and benefits being measured in terms of output Q), then their difference ($\sum e$'s - $\sum d$'s) should be added to or subtracted from equation (5) or (6) to obtain a more accurate measurement of income effects of FDI. How does the size of the intermediate input (i.e., I in equation 1) affect income effects of FDI? The answer depends entirely on whether I represents a (backward) linkage effect or simply a movement of intermediate inputs from one (domestic) sector of the host economy to another (foreign) sector. If I represents the latter, then this is a mere shifting of intermediate inputs within the host economy, and the size of I on income effects of FDI becomes irrelevant. In that case, it does not matter whether I come from domestic suppliers or foreign suppliers. On the other hand, if one drops the no-linkage assumption and let I stand for the net creation of additional intermediate inputs by the foreign firm as is true when linkage effects exist, then it matters whether the intermediate good come from a domestic source or from a foreign source. In the event that domestic suppliers are involved, one should consider the reward to I, namely i , as an addition to the net income effect of FDI. In that case, income effects b given by equation (6) can be restated as

$$b = (q - q') - (k_f + m_f) + i \quad (10)$$

In the event that no backward linkage effects exist, it does not matter at all whether the intermediate input I is of domestic or foreign origin. If it is of domestic origin, it simply represents a movement from one sector to another within the same economy. But if it is of foreign origin, then, of course, the income associated with I accrues to foreign owners and not domestic owners.

FOREIGN INVESTMENT AND GROWTH: SOME RECENT EVIDENCE

On conceptual ground, we have argued that FDI activities tend to increase host countries' income unless a condition that could cause adverse

effects such as price distortion exists. This means that in cases of an open and well-functioning market economy, where price and exchange rate distortions are negligible, one would expect FDI to contribute to output growth in the host countries. The available empirical record is not always clear-cut on this point, however. While some studies saw a causal positive relationship between FDI and growth, others concluded that such a causality may be unascertainable, or that the positive association between FDI and growth may actually indicate a two-way relationship rather than an one way. For example, a study based on OECD data concluded that FDI has a favorable effect on growth, and the strength of such effect depends on the availability of human capital in the host country (Borensztein, Gregorio, Lee 1998). Similarly, the record of Brazil for the 1960-95 period shows FDI to play a positive role in that country's economic growth (Nader, 1998). By the same token, U.S. direct investment in Brazil during 1953-82 appeared to have a positive impact on Brazilian GDP, private consumption, and public consumption (Bonitsis and Aggarwal, 1990). On the other hand, a more recent study on the role of FDI on Chinese economic growth observed a bidirectional causality between growth, FDI, and exports (Liu, Burrridge, and Sinclair 2002). This bilateral causality was also found in the case of Malaysia during 1965-93 (Doraisami and Leng, 1995). Still, an examination of the Indian experience suggests that causality runs more from GDD growth to FDI than the other way around (Chakraborty and Basu, 2002).

On another level, the contribution of FDI to economic growth can also be explained in terms of the higher efficiency of the foreign firm compared with the domestic competitor. This efficiency superiority can be attributed to better management and technology (Harrison, 1994). In that spirit, there is evidence that FDI contributes more to economic growth than domestic investment, provided that the host country has adequate absorptive capacity. This is a conclusion of a study covering 69 developing countries based upon 1980's and 1990's data (Borensztein, Gregorio, Lee 1996). The role of FDI in growth also depends on the degree of complementarity and substitution between FDI and domestic investment (de Mello, 1999). Regarding the dependency thesis, a study of seventy seven countries during

1967-92 found no support for the dependency proposition that links FDI to underdevelopment in LDCs (Farmer, 1999).

CONCLUDING REMARKS

1. In the absence of unfavorable displacement of domestic firms and relevant price distortions, operation of a foreign firm is incapable of contributing negatively to host country's national income as long as the domestic factors employed by the foreign firm have good knowledge of labor market conditions and behave as income maximizers.
2. Thus, the only way a foreign firm can transfer more income than the value added accruing to domestic factors, resulting in negative income effects, is through distortions in the price structure, which enables the foreign firm to siphon off more real output than is indicated by the nominal amount of repatriated income/profit.
3. Underpayment to the domestic factors is capable of reducing income benefits to the host economy but cannot render them negative if (1) domestic factors are income maximizers and aware of alternative job opportunities, and (2) a foreign enterprise does not adversely affect local economic opportunities, and (3) there are no price distortions associated with the FDI operation.
4. Local unemployment conditions are an important factor in determining the income benefits of FDI. Everything being equal, the higher is the level of local unemployment, the greater are the income benefits of FDI.
5. As far as income effects are concerned, it is immaterial whether the intermediate inputs used by the foreign firm come from domestic or foreign source if FDI does not create net addition of intermediate products in the host economy. Contrary to popular perception, high domestic content requirement does not increase income and employment in the host economy if no backward linkage effects exist.

6. There is no meaningful or consistent linkage between real income effects and balance-of-payments effects. Conclusions based on one kind of effects need not be consistent with those based on the other; therefore each type of effects should be considered on its own merits. For example, a country with no BOP problems should concentrate on income and employment effects alone when evaluating a FDI proposal.

Thus, in terms of policy implications, fear of negative income effects under any circumstances is often a misplaced concern. Instead, proper policy concerns should be mainly directed toward reducing or eliminating the conditions or mechanisms that enable the foreign firm to transfer more real income than that which accrues to the domestic factors (net of opportunity costs), leading to adverse income effects. The major mechanism worthy of special attention includes sources of distortion in the price structure relevant to FDI in both the domestic and foreign exchange areas, as well as direct or disguised subsidies. Promotion of a competitive environment is very essential for coping with problems created by severe distortions.

While it is not analyzed in this paper, transfer pricing should be prevented because it provides the means by which the foreign firm can transmit more real income than is apparent on the book. Host country's requirement of domestic content is not an unqualified benefit and should be judged on a case-by-case basis. For instance, to the extent that the use of foreign intermediate inputs denies income that could have accrued to domestic owners and increases foreign incomes that would be remitted, a stricter domestic content requirement is desirable because it will benefit the host economy. Positive measures to increase income benefits should also be contemplated in the area of encouraging reinvested earnings whereby a portion of foreign incomes is re-channeled back to the local income stream. Also, as equations (7) and (9) show, reinvested earnings will strengthen both income effects and balance-of-payments effects.

Finally, although the dependency thesis may imply adverse income effects, this paper does not provide an adequate framework to help evaluate that thesis. This is because it is concerned with a broader issue in which the

major points of attentions are unfavorable structural changes with serious adverse consequences on income distribution and power relationship in host countries, as well as long term economic and political dependency on the capitalist industrial economies. In short, the dependency thesis is more concerned with FDI and development (as opposed to growth) in LDCs, whereas this paper concentrates on FDI and growth.

REFERENCES

- Biersteker, T. J. (1987). *Distortions or development? Contending perspectives on the multinational corporation*. Cambridge, MA: MIT Press.
- Bonitsis, T. H & Raj Aggarwal (1990). U.S. direct foreign investment and economic growth in Brazil: An econometric causal analysis. *The International Journal of Finance*, 2(2), 12-19.
- Borensztein, E., J. De Gregorio & J.W. Lee (1998). How does foreign direct investment affect economic growth. *Journal of International Economics*, 45(1), 115-135.
- Bos, H.C., M. Sanders & C. Secchi (1974). *Private foreign investment in developing countries*. Dordrecht, Holland: D. Reidel.
- Cardoso, F. H.. (1973). Associated dependent development: theoretical and practical implications. In A. Stepan, (Ed.) *Authoritarian Brazil: Origin, Policy, And Future*. New Haven, CT: Yale University Press, 149-172.
- Chakraborty, C. & P. Basu (2002). Foreign direct investment and growth in India: A cointegration approach. *Applied Economics*, 34, 1061-1073.
- Chow, Y-F. & J. Zeng (2002). Foreign capital in a neoclassical model of growth. *Applied Economic Letters*, 8, 613-615.
- de Mello, L. R. Jr. (1999). Foreign direct investment-led growth: evidence from time-series and panel data. *Oxford Economic Paper*, 51(1), 133-51.
- Doraisami, A. & G. K. Leng. (1995). Foreign direct investment and economic growth: Some time-series evidence of the Malaysian experience. *Asian Economies*, 24(3), 50-58.

- Farmer, B. R. (1999). *The question of dependency and economic development*, Lanham, MD: Lexington Books.
- Frank, A. G. (1967). *Capitalism and underdevelopment in Latin America*. New York: Monthly Review Press.
- Harrison, A. (1994). The role of multinationals in economic development: The benefits of foreign direct investment. *Columbia Journal of World Business*, 29(4), 6-12.
- Lall, S. & P. Streeten. (1977). *Foreign investment, transnationals and developing countries*. London: Macmillan.
- Liu, X, P. Burridge & P.J.N Sinclair (2002). Relationships between economic growth, foreign direct investment and trade: Evidence from China. *Applied Economics*, 34(July), 1433-41.
- MacDougall, G. D. A. (1960). The benefits and costs of private investment from abroad: A theoretical approach, *Economic Record*, 36(March).
- Nader, N. (1998). The impact of foreign capital on the Brazilian economy. *Quarterly Review of Economics and Finance*, 38(3), 483-503.
- Prebisch, R. (1959). Commercial policy in the underdeveloped countries. *American Economic Review*, 49(2), 251-73.
- Reuber, G. L. (1973). *Private foreign investment in development*. Oxford: Clarendon Press.
- Singer, H., (1950). The distribution of gains between investing and borrowing countries. *American Economic Review*, 40(May), 473-85.
- Vaitsos, C. V. (1974). Income distribution and welfare considerations. In . H. Dunning, (Ed.) *Economic Analysis and the Multinational Enterprise*. London: George Allen & Unwin.