Items included in the Gross Value Added of Enterprise	Suggested Discount Rate	
	x_{di} Claims of Domestic Factor	x_{fi} Claims of Foreign Factor
Royalties for property rights	Treat as current?	Same rate as world capital-cost?
Profits	Low; not to exceed more than 1/2 of discount factor for foreign profit claims	World prime rate for capital-cost. See text on suggested treatment of undistributed profits.
Tax payments	Zero	Prime world rate for capital-cost

nationals should be discounted at a lower rate compared to profits by foreigners. The discount rate for profit claims of nationals would depend on the valuation given to the development of domestic enterprise and of capital formation by the country's development planning agency. At least, an upper limit can be set by determining the discount rate for evaluating profit streams accruing to foreigners. A suggestion which seems reasonable is to use the prime world rate of interest for these streams. That rate represents the cost of borrowing capital from abroad.

A differential discounting of foreign as against national claims to the profits of the enterprise is essential to the question of joint venture enterprises and strictly foreign subsidiaries. Since in the joint venture, profit claims are divided between the owners of equity, given two projects whose streams of payments are identical, the discounted value, V_t^*, of the joint venture would exceed that of the subsidiary. Moreover, the domestic factor gain index, R^*, will be higher for the joint venture not only as a result of domestic profit claims being positive compared to zero otherwise (in the case of the subsidiary), but also because the discounted value of the "total" profit claims of the joint venture will be higher than that of the foreign subsidiary.

Reinvested profits and profit remittances. The profits which are ploughed back directly into the plant of the foreign enterprise are quite different from profit remittances from the standpoint of the host country's economic interest. Profit remittances are in essence dividend payments to foreign factors.[3] Profits ploughed back to increase the capacity of the plant represent an increase of current domestic factor (more capital formation), but is offset by the increase of a long term foreign claim. Thus, from this standpoint of the host country the reinvested profit is equivalent to a long term capital inflow (although it may not be recorded in balance of payments statistics).

From the national viewpoint of the host country, a dollar of reinvested profit is more desirable than an equivalent dollar of profit remittance. It is suggested that a correction for undistributed profits be made so that they are eliminated from the computation of R^*. The inclusion of reinvested profits creates a downward bias on the value of current host country factor gains, since these profits

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[3] Strictly speaking, of course, this may not be so. Remitted profits may only constitute, in the case of a subsidiary, the plant's contribution to the parent company's surplus, from which a portion will be paid out as dividends.

appear in the denominator of the formula for R. This is true even if the reinvested profits streams are discounted at rates lower than the one used for profit remittances.

The reason for the adjustment is sound. Reinvested profits are like any foreign investment accompanied by a real transfer of capital resources into a host country.

Let the m th payment, or v_{mt}, be profits after taxes; v_{mt} may be decomposed into its undistributed and distributed profits. Thus,

$$v_{mt} = v^u_{mt} + v^r_{mt}, \tag{14}$$

where u and r are superscripts respectively identifying undistributed and distributed (r stand for remitted). In greater detail, following (3),

$$v^u_{mt} = x^u_{dmt} + x^u_{fmt},$$

$$v^r_{mt} = x^r_{dmt} + x^r_{fmt}.$$

To be more general, assume that the ownership of the foreign enterprise has some domestic component, where λ $(1>\lambda \geq 0)$ is the ratio of equity owned by host country nationals.

The sharing of v_{mt} by the nationality of claimants is:

share of host country equity owners = λv_{mt}

share of foreign equity ownership = $(1-\lambda)\, v_{mt}$.

(a) Case of foreign subsidiary, $\lambda=0$. In the case of the foreign subsidiary, $\lambda = 0$. Hence, all the claimants to undistributed profits are foreign factors, i.e.,

$$v_{mt} = x^{u}_{fmt} + x^{r}_{fmt},$$

since obviously $x^{u}_{dmt} = x^{r}_{dmt} = 0$.

Assume now that all payment streams are discounted, by using the notation (*) in accordance with (13). Using (12), but isolating the profit streams, we have

$$(15)\quad V^{*}_{t} = \sum_{t=0}^{T} \sum_{i=1}^{m-1} x^{*}_{dit} + \sum_{t=0}^{T} \sum_{i=1}^{m-1} x^{*}_{fit} + \sum_{t=0}^{T} x^{u*}_{fmt} + \sum_{t=0}^{T} x^{r*}_{fmt},$$

where the claims to value added streams of the foreign factors are given by the last three terms.

We may define the sum of adjusted value added streams, discounted, as

$$(16) \qquad V_t^{**} = V_t^{*} - \sum_{t=0}^{T} v_{mt}^{u*} = V_t^{*} - \sum_{t=0}^{T} x_{mt}^{u*}$$

$$= \sum_{t=0}^{T} \sum_{i=1}^{m-1} x_{dit}^{*} + \sum_{t=0}^{T} \sum_{i=1}^{m-1} x_{fit}^{*} + \sum_{t=0}^{T} x_{fmt}^{r*}$$

Dividing (6) by V_t^{**}, we get

$$(17) \qquad 1 = d^{**} + f^{**}$$

where

$$d^{**} = \sum_{t=0}^{T} \sum_{i=1}^{m-1} x_{dit}^{*} / V_t^{**}$$

and

$$f^{**} = \left\{ \sum_{t=0}^{T} \sum_{i=1}^{m-1} x_{fit}^{*} + \sum_{t=0}^{T} x_{fmt}^{r*} \right\} \Big/ V_t^{**}.$$

Provided the policy of an enterprise in terms of the payment of dividends or profit remittances is known or some predictive device can be set up to isolate the undistributed profits over time of an enterprise, it is possible to get the measures of d^{**} and f^{**}, and correspondingly the adjusted domestic factor gain ratio,

$$(18) \qquad R^{**} = d^{**}/f^{**}.$$

(b) Case of joint venture, $\lambda>0$. When the enterprise is a joint venture, so that the ownership of ploughed back

profits is also mixed, there are essentially two solutions to the derivation of the domestic factor gain index. One is to treat ploughed back profit exactly as in the case of $\lambda = 0$. This treatment is neutral to the nationality of the claimant on the surplus of the firm which is earned as value added. This calls for the use of the same formula as (17), where undistributed profits is removed from V_t^{**}.

If the planner's objective function is quite strong with respect to favoring the nationality of ownership of capital, a non-symmetric treatment for ploughed back profits which represents claims of domestic factors is justified. Now since x^u_{dmt}, $x^r_{dmt} > 0$, we can rewrite from (15), taking care to isolate the profit streams:

$$(15a) \qquad V_t^* = \sum_{t=0}^{T} \sum_{i=1}^{m-1} x^*_{dit} + \sum_{t=0}^{T} \left(x^{u*}_{dmt} + x^{r*}_{dmt} \right)$$

$$+ \sum_{t=0}^{T} \sum_{i=1}^{m-1} x^*_{fit} + \sum_{t=0}^{T} \left(x^{u*}_{fmt} + x^{r*}_{fmt} \right).$$

Deriving V_t^{**}, and allowing the equity participation ratio λ to change through time, we get

$$(16a) \qquad V_t^{**} = V_t^* - \sum_{t=0}^{T} x^{u*}_{fmt}$$

$$= \left\{ \sum_{t=0} \sum_{i} x^{*}_{dit} + \sum_{t} \lambda_t v^{*}_{mt} \right\}$$

$$+ \left\{ \sum_{t} \sum_{i} x^{*}_{fit} + \sum_{t} (1-\lambda_t) v^{*}_{mt} - \sum_{t}^{T} x^{u*}_{fmt} \right\} .$$

The above leads again to (17), or to the domestic factor gain index,

$$R^{**} = d^{**}/f^{**}$$

where

$$d^{**} = \left\{ \sum_{t} \sum_{i} x^{*}_{dit} + \sum_{t} \lambda_t v^{*}_{mt} \right\} \Big/ V^{**}_{t}$$

$$f^{**} = \left\{ \sum_{t} \sum_{i} x^{*}_{dit} + \sum_{t} (1-\lambda_t) v^{*}_{mt} - \Sigma x^{u*}_{fmt} \right\} \Big/ V^{**}_{t} .$$

Decomposing R^{**}. It should be pointed out that R^{**} can be decomposed easily into many components, depending on whether specific domestic factors are stressed as a matter of policy. Parallelling the discussion of the first section,

(18a) $$R^{**} = w^{**}/f^{**} + d'^{**}/f^{**}$$

if labor is to be isolated, or

(18b) $$R^{**} = w^{**}/f^{**} + t^{**}/f^{**} + d'^{**}/f^{**}$$

if both labor and taxes are being emphasized, where

$$d'^{**} = d^{**} - w^{**} - t^{**}.$$

Additional Information Needed by Planners

The host country factor gains indexes are not meant to substitute for project evaluation methods involving foreign investments. They can be of immense value in sharpening the analysis of foreign investment project proposals insofar as being able to isolate major factor gains accruing to host country nationals.

While knowledge about the nationality of the payments flows is very important, other aspects of the project should be sought.

Indirect value added. The measure we have proposed deals only with the direct value added of the project. Some knowledge about the additional value added accruing to host country factors that will be generated by a project is very desirable. Ideally, this can be derived by examining the relation of the enterprise to the total interindustrial structure of the economy. Information from input-output tables, when they are available, should be able to guide planners about forward and backward linkages. As a matter of practice in feasibility studies, the domestic raw material content of

the project proposal is reported. In addition, it is desirable to have information about the industries to which the enterprise will be selling its output. This will provide an idea about the forward linkages that the enterprise is likely to stimulate. A crude way of analyzing indirect value added accruing to domestic factors, largely in the context of backward linkage, is developed later in this paper.[4]

Economic Efficiency. By what standards can economic efficiency be judged? Perhaps the best test is in terms of the relative price the enterprise charges on its goods compared to the export prices of other countries producing the same goods. If an enterprise needs initial protection, what is the time table needed so that at least the country can expect the industry to reach reasonable prices for the commodity it produces? One test of economic efficiency is the ability of the firm to export its output. A foreign enterprise that submits an early schedule for the time it can export some of its output is a priori more efficient than one that intends to sell its output to the host country market.

Investments Funds Borrowed in Host Countries. Some foreign investment projects, especially those involving joint

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[4]See below, pp. 57-68.

ventures, oftentimes involve the commitment of host country investment funds to the project. For instance, in the Philippines, the investment ventures recently involving the construction of the Sheraton and the Hilton hotels in Manila as well as the recent Phinma-Le Nickel proposal to exploit the Surigao nickel deposits involved the commitment of host country government funds. If alternative project proposals involving less commitment of host country savings are available, for a given host country equity ratio on the investment desired, the better for the host country concerned.

IV. A Study of Gains from US Foreign Direct Investments

One major application of the method proposed in this paper is the study of intercountry differences in gains from foreign investments. Such questions may therefore be posed directly. How do foreign investments in industrial countries compare with those in less developed countries in terms of their domestic factor gains? Or simply, among individual countries with respect to others? Or, what is the composition of the gains of different countries from foreign direct investments?

This part of the paper examines United States direct investments by regions and countries. A survey of American

business investments abroad undertaken in 1957 by the US Department of Commerce[5] provides the data for this study. A cross-section of worldwide investments is complicated by different things. First, the age structure of the investments differ. Second, the investments differ in their output structure. Third, there are different economic policies pursued by different countries.

Data

From here on, we shall refer to the 1957 survey of US business investments as the data source.

It will be easier to explain the data by quoting directly from the data source (p. 76):

> The Survey of U.S. Business Investments in Foreign Countries for the year 1957 was designed to cover all direct foreign investments, defined to include all those foreign business enterprises in which a U.S. resident person, organization, or affiliated group, owned a 25 percent interest, either in the voting stock of a foreign corporation, or an equivalent ownership in a nonincorporated foreign enterprise. In addition, this Survey covered for the first time associated foreign enterprises in which there was direct U.S. ownership of from 10 to 25 percent of the voting stock....

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[5]US Department of Commerce, *US Business Investments in Foreign Countries* (Washington D.C. 1960).

> In a few important instances foreign companies were included as direct investments although the U.S. stock ownership was slightly less than 25 percent but where strong management relationships were known to exist.
>
> Publicly-owned foreign corporations, 50 percent or more of the stock of which was owned in the United States, were included even when there was no single controlling U.S. interest. Data on the U.S. investment in the securities and surplus of such companies were obtained from public sources and stockholder's reports.
>
> Response in this Survey was mandatory under the Bretton Woods Agreement Act....
>
> The coverage is believed to be virtually complete, at least as far as major investors are concerned....
>
> The following holdings were excluded from this Survey:
>
> (1) Individuals (but not business firms) whose aggregate foreign direct investment totaled less than $25,000.
>
> (2) Foreign operations or properties of religious, charitable, or other nonprofit organizations, except for those cases where the foreign investment was a business enterprise conducted for profit.
>
> (3) Real property held for personal use....
>
> (4) The foreign interests of corporations incorporated in the United States but owned in substantial part abroad, and with no operations in the United States, were included only in proportion to the U.S. ownership of the U.S. parent organization....

The methodology of aggregating the estimates and its limitations are well described in the data source. The Survey