too, in the sense that the developed host country to a foreign investment also has some of its nationals engaged in capturing part of the income stream from imports for their own benefit, by either engaging in foreign trade or an overseas direct investments or in both.

It can be shown intuitively that, assuming that there is some fair amount of backward linkage, total indirect R as defined in equation (24) will be at least equal to the measure of total direct factor gains, R^{**} i.e.,

$$\text{total indirect } R \geq R^{**}$$

or

$$\frac{\delta}{1-\delta} \geq \frac{d^{**}}{f^{**}} .$$

Suppose that the foreign enterprise buys inputs and sells outputs only to foreign-owned enterprises, so that there is vertical integration of the operations of the different foreign firms. Then total indirect R cannot be different from the average of host country factor gains index of the vertically integrated foreign industry. However, such an industry would be rare to find. Host country nationals are likely to be buyers or sellers at some process of the inter-industrial trade (perhaps as part-owners of the enterprise). The more host country nationals get involved in transactions involving the purchases or the sales of the foreign enterprise,

the more is the indirect value added accruing to host country nationals. Therefore, the greater is the indirect value added host country factor gains index to the direct value added.

CONCLUSION

1. This paper suggested a quantitative measure of host country benefits from direct foreign investments. This was done by considering all payments to host country factors, including tax collections, as host country benefits in relation to all current claims on the value added arising from the investments of the foreign nationals. The ratios of these gains to the foreign claims were then considered. The measure is a simple extension of benefit-cost analysis and the ratios are in fact benefit-cost ratios.

2. Suggestions were made concerning the applications of the measure of factor gains of the host country to microeconomic project planning, taking care that the view of the economy's gain is considered. Some rules of thumb are suggested in discounting the future streams of payments. Some adjustments were suggested in the computation of the host country factor gains ratios by a special treatment of undistributed profits. This was done simply by eliminating it, since undistributed profits are like foreign exchange inflows.

3. A study of host country gains from US overseas investments is reported in detail, applying the measure proposed for the cross-section observations reported in a 1957 US Department of Commerce Survey of US Business Investments abroad. The major limitation of this study is that it applies only to the year 1957. When a similar survey is available in the future, it will be interesting to make a parallel study. It will also be interesting to study European direct investments overseas. Some of the salient findings of this study are:

(a) The more advanced the development of the nation, the higher is the index of gains of the host country for every dollar of US claim on value added arising from a direct investment.

(b) The employment impact of US overseas investments were greater for the richer countries than for the poorer. An apparent major reason for this is that the greater portion of US investments in the advanced nations are in manufacturing. The wage bill per dollar of US claims is also smaller for the poorer countries compared to the richer ones.

(c) The tax benefits of host countries are also higher per dollar of US current claims arising from their direct investments for the richer

countries than for the poorer.

Although the above differences are quite remarkable, such quantitative dissimilarities in the factor gain indexes are probably less striking. The opportunity costs of certain factors, especially labor in the countries with labor surplus, are so little and the marginal gains so much. In contrast the situation in many advanced countries is different since the employment generated may compete with other uses of domestic resources. Yet, after accounting for these differences, the pattern of investments appear to show that the more advanced countries generate more real domestic benefits from foreign investments compared to those in the poor.

4. The measure proposed does not include measurements of indirect benefits generated by foreign investments. These are harder to quantify. Indeed, major foreign investment projects have been justified for a variety of reasons, among which are saving-augmentation, pioneering activities in specific sectors and technological transmission of skills. But the chief obstacle to the measurements of indirect effects is the absence of such data from firm accounts. Our attempt to measure indirect value added accruing to domestic factors yields the conclusion that the richer the country, the more would be the indirect value added effects per dollar of foreign claims on the investment.

5. The findings from the cross-section study of US investments seem to suggest an awkward result which is reminiscent of the vicious circle reasoning. To reap more from foreign investments, a country must be richer. If it is poor, the relative gains from foreign investments are not so much, even after adjustments for opportunity costs of host country factors employed.

6. Awareness of these factor gains quantitatively provide us with information relevant to economic policy. In order that these ratios can be used effectively in the planning of new foreign investments, however, additional information has to be known on matters like economic feasibility, economic efficiency, and potential location in the structure of economic linkages in production. However, the availability of measures like the ones proposed in this paper clarifies quite a lot of some of the confusion in economic reasoning about foreign investments, and the profit repatriation problem from the viewpoint of the host country.

7. This research investigation opens up some interesting questions, which we hope future research will answer. What is the specific nature of the gains from foreign investments by the type of industries pursued? The temporary evidence we have is that this is highest for manufacturing and lowest for purely extractive industries. The author hopes to

examine this question in greater detail later. Are these measured factor gains related to the degree of economic efficiency of the industries or to the age structure of the investments? How much of these value added gains for domestic factors are the result of misallocation of resources due to tariff and industrial promotion policies? These are important questions.

APPENDIXES

Appendix Table A1. FOREIGN EXCHANGE RATES USED FOR SELECTED COUNTRIES, 1957
(United States dollars per unit of foreign currency)

Country	Official or current rates
Latin American Republics:	
Argentina	0.026
Bolivia	.00012
Brazil	.013
Chile	.0016
Colombia	.17
Costa Rica	.176
Ecuador	.066
El Salvador	.40
Haiti	.20
Honduras	.50
Mexico	.08
Nicaragua	.15
Paraguay	.009
Peru	.05
Uruguay	.24
Venezuela	.30
Western Hemisphere dependencies:	
Bahamas, Bermuda, & Jamaica	2.80
Other British dependencies	.58
French dependencies	.0027
Netherlands & West Indies and Surinam	.53
Europe:	
Austria	.04
Belgium and Luxembourg	.02
Denmark	.145
Eire	2.79
Finland	.004
France	.0027
Germany	.238
Greece	.003
Italy	.0016
Netherlands	.26
Norway	.14
Portugal	.035
Spain	.024
Sweden	.19
Switzerland & Liechtenstein	.23
Turkey	.357
United Kingdom	2.80
Africa:	
Algeria and Morocco	.0027
Belgian Congo	.02
Africa - Continued	
British East Africa & Somaliland	.14
Egypt and Sudan	2.87
Eritrea and Ethiopia	.40
French Equatorial Africa, French West Africa & Madagascar	.006
Ghana, Nigeria & Other British West Africa	2.80
Libya	2.82
Portuguese Africa	.035
Rhodesia & Nyasaland	2.80
Spanish Africa	.024
Tunisia	.003
Union of South Africa	2.78
Middle East:	
Aden	.14
Iran	.013
Iraq and Jordan	2.80
Israel	.55
Kuwait & Saudi Arabia	.20
Lebanon	.31
Syria	.28
Far East:	
Afghanistan	.02
Burma, Ceylon, India & Pakistan	.21
Cambodia, Laos & Vietnam	.029
Hongkong	.175
Indonesia	.058
Japan	.0028
Korea	.002
Malaya	.325
Philippine Republic	.50
Taiwan	.25
Thailand	.05
Oceania:	
Australia	2.23
British Oceania	.21
French Oceania	.02
Netherlands New Guinea	.26
New Zealand	2.77
Portuguese dependencies	.035

Note: Currencies of the following countries were taken at par with the U.S. dollar: Canada, Cuba, Dominican Republic, Guatemala, Panama, and Liberia.

Source: U.S. Business Investments in Foreign Countries, page 79.

Appendix Table A2. CURRENT EXPENDITURES OF U.S. DIRECT INVESTMENTS, BY AREA AND COUNTRY
(US Dollars, Million)

Area and Country	Total Expenditure Adjusted[a]	Materials and Services	Wages and Salaries	Depreciation and Depletion	Interest	Other Taxes (indirect)	Income Taxes	Undistributed Profits[a]	Distributed Profits
All areas, total	39,455	22,025	6,878	1,708	426	2,106	2,395	1,488	2,429
Canada	12,018	7,001	2,654	586	161	218	582	449	367
Latin American Republics, total	7,699	3,580	1,374	426	96	508	575	353	787
Mexico, Central America, & West Indies, total	2,256	1,213	472	89	33	129	99	91	130
Cuba	760	402	171	25	16	41	29	31	45
Dominican Republic	72	25	13	4	(**)	16	5	1	8
Guatemala	71	35	21	4	(**)	8	1	2	0
Honduras	85	40	26	11	(**)	2	1	1	4
Mexico	964	575	187	33	15	42	56	16	40
Panama	170	73	27	6	1	3	4	39	17
Other countries	134	63	27	8	1	15	2	2	16
South America, total	5,442	2,367	902	337	63	379	476	156	762
Argentina	513	335	89	13	8	23	15	18	12
Brazil	1,287	863	184	34	27	69	38	35	37
Chile	408	146	84	28	9	7	85	5	44
Colombia	346	181	79	27	3	9	26	0	21
Peru	281	138	58	19	6	11	14	13	22
Venezuela	2,482	630	382	213	8	248	295	92	614
Other countries	124	72	25	5	2	12	3	2	3
Western Hemisphere dependencies, total	565	267	99	33	2	8	28	95	33
British dependencies	481	258	56	26	2	7	20	94	18
Other European dependencies	86	9	44	8	(**)	1	9	0	15
Europe, total	11,532	6,947	1,950	355	97	1,031	512	326	314
Common Market, total	5,187	3,143	750	190	55	639	182	128	100
Belgium and Luxembourg	443	281	69	13	4	31	10	23	12
France	1,635	940	250	50	16	251	63	38	27
Germany	1,827	1,170	284	86	19	136	60	43	29
Italy	797	434	100	27	12	182	20	11	11

Area and Country	Total Expenditure Adjusted	Materials and Services	Wages and Salaries	Depreciation and Depletion	Interest	Other Taxes (indirect)	Income Taxes	Undistributed Profits	Distributed Profits
Netherlands	484	316	48	14	4	39	29	13	21
Other Europe, total	6,346	3,804	1,200	166	41	392	329	195	219
Denmark	205	152	16	4	1	21	3	4	4
Norway	136	87	20	7	1	14	4	1	2
Spain	84	45	21	3	1	2	5	3	4
Sweden	369	265	43	8	2	33	9	6	3
Switzerland	200	134	27	4	1	15	5	3	11
United Kingdom	4,932	2,799	1,030	128	33	288	289	175	190
Other countries	429	322	43	13	2	18	15	6	10
Africa, total	1,149	750	123	44	9	56	71	48	48
North Africa, total	205	145	20	6	2	16	1	1	14
Egypt, U.A.R.	71	51	9	2	1	1	(**)	2	5
Other countries	134	94	11	3	1	16	1	4	4
East Africa	55	38	6	2	(**)	4	1	2	2
West Africa	205	114	21	11	1	10	10	22	16
Central & South Africa	747	451	76	26	6	25	59	32	72
Rhodesia and Nyasaland	109	49	11	10	1	2	21	1	14
Union of South Africa	590	380	64	15	5	22	38	25	41
Other countries	28	22	2	1	(**)	1	(**)	1	1
Asia, total	3,947	1,732	425	160	39	226	550	124	691
Middle East	1,820	466	125	93	2	61	448	400	225
Far East, total	2,084	1,266	300	66	37	165	102	86	62
India	318	197	39	8	5	40	16	7	6
Japan	866	628	113	18	20	39	25	8	15
Philippine Republic	376	207	64	15	5	27	15	22	21
Other countries	519	234	84	24	6	58	45	48	20
Oceania, total	1,427	916	219	49	9	61	71	56	46
Australia	1,225	774	202	45	8	42	63	53	38
New Zealand	189	135	17	3	(**)	17	8	1	8
Other countries	14	7	1	2	(**)	2	(**)	2	0
International	1,112	834	33	51	12	(**)	7	159	16

[a] See text for adjustments made.

(**) Less than $500,000.

Appendix:

Brief Notes on the Literature on the Subject

Soon after this paper was written, the writer became aware of the theoretical discussion centered on gains from foreign investments.

Keynes had written on this subject as early as 1924,[1] largely from the standpoint of the investing country (U.K.). However, the concern on the benefits and costs of foreign investments from the viewpoint of the host country appears to be relatively recent. G.D.A. MacDougall is apparently the first to tackle these questions directly,[2] the analysis in reference to Australia. Proceeding from *caeteris paribus* reasoning and dropping restrictive assumptions one-by-one, MacDougall concludes:

> "... The most important direct gains to Australia from more rather than less private investment from abroad seem likely to come

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[1]J.M. Keynes, "Foreign Investment and the National Advantage," *The Nation and Atheneum*, vol. 35 (August 9, 1924), cited by Murray C. Kemp in some studies to be mentioned below.

[2]G.D.A. MacDougall, "The Benefits and Costs of Private Investment from Abroad: A Theoretical Approach," *Economic Record*, vol. 36 (March 1960), pp. 13-35. Related work has been done by T. Balogh and P.P. Streeten, "Domestic Versus Foreign Investment," *Bulletin Oxford*, University Inst. Statistics, vol. 22 (August 1960), pp. 213-24; revised version in P. Streeten, *Economic Integration*, Leyden, 1961, ch. 4.

> through higher tax revenue from foreign profits (at least if the higher investment is not reduced by lower tax rates), through economies of scale and through external economies generally, especially where Australia firms acquire 'know how' or are forced by foreign competition to adopt more efficient methods." (p. 34).

MacDougall's analysis took into account such other effects as those on terms of trade and on host country financed investments.

A theoretical analysis largely from the standpoint of the investing country is made by Simpson,[3] with very similar findings, "in reverse image" to MacDougall's.

In several papers, utilizing comparative statics, Murray Kemp[4] has tried to determine the optimal level of

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[3] P.B. Simpson, "Foreign Investment and the National Economic Advantage: A Theoretical Analysis," in R.F. Mikesell (ed.) *US Private and Government Investment Abroad*, University of Oregon, 1962, ch. 18.

[4] M.C. Kemp, "Foreign Investment and the National Advantage," *Economic Record*, March 1962, vol. 38, pp. 56-62; *idem*, "The Benefits and Cost of Private Investment Abroad," *Economic Record*, same issue as above, pp. 108-10; *idem*, "The Gain from International Trade and Investment: A Neo-Heckscher-Ohlin Approach," *The American Economic Review*, vol. 56, (Sept. 1966), pp. 788-809.

foreign indebtedness, using taxation (or its reverse, subsidies) as policy instruments. Negishi[5] has advanced this analysis to a dynamic growth context and has arrived at solutions involving policy instruments which contrast with Kemp's. While the questions which have been asked in these theoretical investigations are important, no attempt at direct quantification of gains from foreign investments have been suggested. The theory shows the derived equilibrium conditions from which an optimal tax (subsidy) is derived.

Some of the gains which we attempt to measure in this paper are wellknown from theoretical reasoning. For instance, MacDougall and Balogh -- Streeten have commented on the employment effects. Also, the co-authors of R.F. Mikesell in a study of American investments[6] have described some of the benefits.[7] D. Wells[8] had come close to suggest-

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[5]Takeshi Negishi, "Foreign Investment and the Long Run National Advantage," *Economic Record*, vol. 41 (December 1941), pp. 628-32. M.C. Kemp, "A Guide to Negishi," same issue, pp. 32-3.

[6]R.F. Mikesell (ed.), *US Private and Government Investment Abroad*, University of Oregon, 1962.

[7]See, especially, J.N. Behrman, "Foreign Associates and their Financing," (ch. IV); "Foreign Investment and the Transfer of Knowledge and Skills," (ch. V); "Economic Effects of Private Direct Investment" (ch. VI), in Mikesell (ed.), *op. cit.*

[8]D.A. Wells, "Economic Analysis of Attitudes of Host Countries Toward Direct Private Investment" (ch. XVII) in Mikesell (ed.), *op. cit.*

ing a benefits-cost ratio approach to the evaluation of foreign investments. However, his formula differs from the factor gains index and the methodology for evaluating foreign investments suggested in this paper. Wells made only passing mention of the benefits-cost approach.

No one has attempted an empirical measurement of the benefits and costs of foreign investments nor suggested an evaluation of foreign investment proposals as pointed out in this paper.