

RELATING FOREIGN DIRECT INVESTMENT AND TRADE FLOW

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abstract: This study presents a descriptive analysis of the Philippine economy in terms of industry and trade structure and later ties this discussion up with the Philippines' experience with foreign direct investment. With these as background, an investigation is made on whether foreign direct investment influences direction of trade flows. Data on direct investment flows from the United States and Japan are collected for the 10-year period 1982-199 and an analysis is done on whether or not there is a relationship between trade flows with these countries and the sectors they choose to invest in.

1. INTRODUCTION

This study is part of a larger study which has as its objective estimating future direction and volume of international trade on a per commodity basis. The result can then be used to determine future cargo demand of ports in the various countries.

The direction and volume of international trade are affected by several factors which include trade policies and the fluctuation of exchange rates to name a few. The discussion in this paper centers around the effect of foreign direct investment (FDI) on the direction of trade flow on a commodity basis. In particular, the effect of the inflow of investments on the Philippines' source of imports is examined here.

The paper starts out with a general discussion on the industry structure of the Philippines. This discussion will serve to highlight the stagnation of the manufacturing sector and point out the need to encourage more investments into it because of its strong backward and forward linkages.

Section 3 is a discussion on the trade structure of the Philippines. It presents the Philippines' balance of trade situation, trend in its exports and imports and leading trade partners.

Section 4 reviews the Philippines' experience with foreign direct investment.

Section 5 relates investment flows with source of imports.

2. INDUSTRY STRUCTURE

2.1 Major Industry Classifications

The economy of the Philippines is divided into three major categories: (1) agriculture,

fishery and forestry, (2) industrial sector, and (3) services or tertiary sector.

The structure of these industries, in terms of their contribution to Gross National Product (GNP), did not change significantly from 1973-1992. Table 1 shows the percent share of the different sectors in the twenty-year period. In 1973, the services sector contributed P 151,132 million or 36.5 percent of GNP. It was followed closely by the industrial sector which accounted for 36.3 percent and finally by the agriculture, fishery and forestry sector which contributed P 113,901 million or 27.5 percent of GNP.

In 1992, the ranking of the industries in terms of contribution to GNP was the same. Their percent share to GNP was not significantly different from their 1973 values. The share of the agriculture, fishery and forestry sector decreased from 27.5 percent to 22.1 percent. That of the industrial sector decreased two percentage points to 34.5 percent while the share of the services sector was 41.6 percent, 5.1 percentage points higher than its 1973 level.

Table 1. Gross National Product by Industrial Origin
(in percent)

Year	Agriculture, Forestry & Fishery	Industrial Sector	Services Sector
1973	27.47	36.30	36.45
1974	25.52	37.20	36.88
1975	24.74	38.48	37.04
1976	25.16	39.48	36.20
1977	24.83	40.08	35.76
1978	24.41	40.13	35.85
1979	23.68	40.47	35.55
1980	23.55	40.59	36.05
1981	23.63	41.15	35.59
1982	23.16	41.00	36.97
1983	22.06	41.04	38.47
1984	23.94	39.78	39.39
1985	25.28	36.06	41.50
1986	25.16	35.42	41.53
1987	24.71	35.51	41.58
1988	23.81	35.64	41.50
1989	23.19	36.48	41.59
1990	22.29	35.80	41.40
1991	22.45	34.62	41.54
1992	22.12	34.25	41.60

Source: Central Bank of the Philippines

In terms of growth rates, the services sector grew fastest at an average annual rate of 3.7 percent. The transportation, communication and storage subsector grew the fastest at the rate of 4.5 percent. The industrial sector was next, growing at an average annual rate of

2.7 percent. Of the manufacturing subsectors, the electricity, gas and water subsector grew fastest at 7.7 percent while the manufacturing subsector grew slowest at 2.2 percent. Of the three major sectors, the agriculture, fishery and forestry sector grew slowest an average annual rate of 1.8 percent.

2.2 Backward and Forward Linkages

The structure of the Philippine economy is presented here by showing the technical interdependence among the different industries as measured by their forward and backward linkages.

The term backward linkage refers to the interconnection of a particular sector *j* to those sectors from which it purchases its inputs. When sector *j* increases its output, the output of the sectors from which it purchases its inputs from will increase as well. The term forward linkage, on the other hand, refers to the interconnection of sector *j* to those sectors to which it sells its output. When the output of the different sectors increase, so will the supply of sector *j* because it sells its production to a number of these sectors.

To measure the strength of the backward and forward linkage of a particular sector in comparison to all the other sectors, the index of the power of dispersion and the index of the sensitivity were used.

Table 2 shows the relative sensitivity and influence of the 11 major sectors of the economy in 1985.

Table 2. Indices of Sensitivity and Power of Dispersion for 11 Major Categories, 1985

SECTOR	Power of Dispersion		Sensitivity of Dispersion	
	Index	Rank	Index	Rank
Agri., fishery & forestry	0.875	10	1.406	2
Mining & quarrying	0.956	7	0.744	8
Manufacturing	1.113	2	2.358	1
Construction	1.171	1	0.690	10
Elec., gas & water	1.102	4	0.860	5
Trans., stor. & comm.	1.108	3	0.768	7
Trade	0.879	9	1.148	3
Finance	0.928	8	0.775	6
Real estate	0.822	11	0.725	9
Private services	0.106	5	0.892	4
Government services	0.981	6	0.632	11

As purchasers of raw materials and services, the following four sectors purchased more from the system than the other industries: (1) construction, (2) manufacturing, (3) transportation, and (4) electricity, gas and water. The backward linkage indices of these sectors were 1.17, 1.11, 1.11 and 1.10, respectively.

As suppliers of raw materials and services, manufacturing ranked first with a forward linkage index of 2.36 followed by agriculture with an index of 1.41 and trade with an index of 1.15. Government services and real estate had the lowest indices which is to be expected because their output is catered to final demand.

3. TRADE STRUCTURE

3.1 Balance of Trade

The Philippines has experienced a deficit in its balance of trade (BOT) in almost all years since after World War II.

During the years 1946-1949, the years immediately after the war, it was necessary that the Philippines import heavily to repair the damage to infrastructure caused by the war and to restore productive capacity.

In the succeeding decade, import controls were put in place to reduce the amount of imports. Still, imports exceeded exports primarily because of the increase in import prices.

In the period 1960-1962, a liberalization program was carried out by depreciating the peso and removing import controls. This caused the BOT to register a surplus in 1963. However, by the end of the 1960s, it deteriorated again. The deficit in the BOT during most part of this decade was due to the need for importation of capital goods required for industrialization (Dasari 1972). By the end of the 1960s, import controls were reinstated due to the worsening of the balance of trade.

Through the 1970s, the liberalization policy continued with the further devaluation of the peso. In 1973, the amount of exports exceeded the amount of imports by due to the increase in export prices in that year. In years 1976, 1977 and 1979, exports registered higher growth rates than imports possibly due to the growth in manufactures exports like apparel, footwear and electronic components (Dohner and Intal 1989). At the same time, import-substituting manufacturing continued to have heavy tariff protection. Still, during these years, as with all years in this decade, the BOT was negative.

In 1981, the Import Liberalization Plan (ILP) was implemented. In 1983 and 1984, the peso was devalued, resulting in a decrease in imports by 18.9 percent and an increase in exports by 7.7 percent in 1984. From 1984 to 1986, it seemed that the gap in BOT was slowly narrowing but by 1987, the gap reached \$ 1,017 million from a level of \$ 202 million and continued to increase until 1990. Although the volume of exports was continuously growing, prices were declining. Moreover, imports were growing at a faster rate as a result of renewed economic vigor and partly by the full implementation of the ILP (NSO 1992).

In 1990, the gap reached an all-time high of \$ 4,020 million. This was attributed to, among other things, the crisis in the Middle East which raised oil prices. Exports which had witnessed two-digit growths since 1987 increased only 4.7 percent in 1990 reflecting low domestic growth and economic slowdown in industrialized countries (NSO 1992).

In 1991 and 1992, growth of exports was again on the rebound increasing by 8.0 percent and 11.1 percent, respectively. The leading commodities were electronics, garments, sugar and crude petroleum exports. Despite the increase, the BOT was still negative, surpassing the deficit in 1990 by \$ 676 million.

3.2 Exports and Imports by Major Commodity Group

Philippine imports since the 1970s to the present have always been comprised more of producer rather than consumer goods. In the twenty-year period 1973-1992, consumer goods accounted for an average of 7.1 percent while capital, raw and intermediate goods and mineral fuel and lubricants accounted for 23.7, 45.0, and 21.4 percent, respectively.

In the 1980s and early 1990s, the principal imports of the Philippines consisted of mineral fuel, lubricants and related materials; electronic and components, electrical and non-electrical machinery; textile yarns; base metals and transport equipment. One reason electronics and components and textile yarns are two of the country's principal imports is because they serve as inputs into what are termed consigned exports. Consigned exports are products which are assembled here. Their raw materials are imported, the Philippines then provides the labor and processing costs and then once assembled, are exported. In the case of transport equipment, these are bought in kits, are assembled here and are sold in the domestic market.

The trend of Philippine exports, on the other hand, changed dramatically in the same period. In 1973, 64.2 percent of exports was composed of agricultural and forest products while 11.2 percent was composed of manufactures. Through the years, the share of agriculture and forest products dropped while the share of manufactures gradually increased. In 1992, there was a complete reversal with manufactures now accounting for 74.3 percent and agriculture and forest products accounting for 16.4 percent. Of the manufactures, garments and electronics have been the country's top exports since the 1980s accounting for around 37 percent of total exports.

3.3 Trading Partners

The U.S. and Japan have been the Philippines top trading partners for the past several decades. In the period 1973-1992, these two countries accounted for as much 66.6 percent of total trade. This figure, however, has gone down considerably reaching 46.3 percent in 1992.

Except for years 1973 and 1975, the U.S. has been the Philippines top trading partner accounting for a high 32.3 percent of total trade in 1973. This share was reduced twenty years later to 25.5 percent. Japan, on the other hand, started out higher than the U.S. in 1973 with a share of 34.3 percent but this figure was almost halved in 1992.

The U.S. has been the number one destination of the country's exports with percent share of exports to the U.S. almost always above 30 percent. In 1973, exports to Japan also accounted for a little more than a third of total exports but its share has declined through the years reaching 17.7 percent. Making up for the slack in exports to Japan was the increase in exports to the European Community (EC) and to the Economic and Social Commission for Asia and the Pacific (ESCAP) which include among others, the ASEAN countries. Exports to the ESCAP and EC were at the levels of \$ 137 million and \$231

million, respectively, in 1973 and reached \$1,344 million and \$1,794 million, respectively, in 1992.

While the export scenario did not change dramatically through the years, except for the change in exports to Japan, the import scenario shows a different story.

Total imports from the U.S. and Japan in 1973 was a high 60.6 percent. Twenty years later, the figure dropped to 39.2 percent. The drop in imports from these two countries was almost equal in magnitude - a 10 percent decrease in the twenty-year span.

Imports from the ESCAP countries rose significantly - from 9.6 percent in 1973 to 26.6 percent in 1985 and then levelled off to around 24 percent. Imports from the ASEAN group, in particular, rose significantly, hitting a high of 14.7 percent also in 1985 and then settling to a level of a little more than 9 percent.

Although there was a drop in total trade with the U.S. and Japan, the story is different for these two countries. Balance of trade with the U.S. was only in deficit five of the twenty years in study. The balance of trade with Japan, on the other hand, was positive only in five out of the twenty years. In 1992, the biggest surplus, in the case of the U.S. and the biggest deficit, in the case of Japan, were registered. The BOT with the U.S. reached an all time high of \$ 1,212 million while BOT with Japan reached an all time low of negative \$ 1,340 million.

4. FDI IN THE PHILIPPINES

Foreign investments have been present for a long time. In the 17th century, the Spanish government established state monopolies; which was followed by investments by the Chinese and British in the 19th century and the Americans in the early part of the 20th century (Virata 1972). During the post-war period up to around 1970, this same investor groups have consistently been the top investors in the Philippines. The Americans, in particular, have dominated the scene since the early 1900 until only very recently. This was the result of one, the long historical relationship between the two countries, the Philippines having been a colony of the United States; and two, the Bell Trade Act which required that the Philippine Commission be amended to give Americans equal rights as Filipinos to exploit the Philippines' natural resources (Dasari 1972).

In the period 1973-1989, except for year 1975, the United States has always held the top position. In 1990, however, it lost its position as top investor. Japan, which had played second fiddle to the United States from the mid-70s to the end of the 1980s, overtook the U. S. in 1990 and has held on to the top spot to date. The reasons behind this upsurge in Japanese investment include among others the appreciation of the yen and voluntary export restrictions on Japan's exports because of its trade surplus.

The sectors which have been recipients of foreign investment have been changing over time. From 1870 up to the 1950s, investment flowed into the establishment and operation of public utilities and to agriculture and mining. Very little went to the manufacturing sector (Subido 1975). There was a reversal in this trend in the years following the war with an increasing share of American investment going into manufacturing and trade (Subido 1975). In the 1970s, manufacturing already occupied the top spot, further solidifying its position in the late 1980s with an upsurge in

investment flow spearheaded by the Asian countries, particularly Japan. Statistics for the period 1973-1992 show that manufacturing did not occupy the top spot only for years 1973 and 1974 when it was second to financial institutions and again in 1982 and 1986 when it was second to mining. During what is termed the third wave of investment, which occurred from 1986 to 1990, a significant portion of FDI into the Philippines still flowed into the manufacturing sector although the general concentration of global direct investment was in the nonmanufacturing sector.

In terms of magnitude of flows, the Philippines, on the average, received \$ 228 million worth of direct investments annually from the period 1980-1992. Table 3 compares these levels of FDI with the country's Gross National Product (GNP). It can be seen from the table that the amount of FDI when compared to the country's GNP is very insignificant; not even 1 percent of total GNP amount. A look at the outflows of the Philippines top two investors will show why this is the case. In 1990, U.S. direct investment to the Philippines to total U.S. direct investment was only 1.7 percent. Japanese investment was likewise minimal, averaging 0.3 percent in the period 1986-1991.

Table 3. GNP and FDI Levels
(in million US dollars)

YEAR	GNP	FDI	FDI/GNP (%)
1980	32,346	229	0.71
1981	35,469	307	0.87
1982	36,669	344	0.94
1983	32,625	276	0.85
1984	30,451	147	0.48
1985	29,684	247	0.83
1986	29,259	108	0.37
1987	32,627	96	0.29
1988	37,589	71	0.19
1989	42,086	203	0.48
1990	44,362	196	0.44
1991	45,482	415	0.91
1992	53,478	328	0.61
1980-1992	37,087	228	0.61

Sources of Data: Central Bank of the Philippines
Philippine Statistical Yearbook

It is very ironic that, against the backdrop of global direct investments more than tripling since 1985, FDI inflows into the Philippines showed declines for years 1986, 1987, 1988 and 1990.

A comparison of the inflows into the Philippines compared with the investments flowing into the other ASEAN countries shows another dismal picture. In terms of percent share, the Philippines received the least amount of inflows in almost all the

years in the period 1981 - 1991. To find the reasons behind this lag, it would first be necessary to go through the factors which make a country attractive to foreign investors.

Investors are concerned with (1) risk minimization and (2) profit maximization. Risk minimization depends on political, social and macroeconomic stability while profit maximization depends on market opportunities, factor endowments and efficiency of institutional, human and physical infrastructure (Yue 1993). While the other countries of the ASEAN are considered to be stable politically, economically and socially, the Philippines is not. In fact, political instability and weak political leadership have been cited as the major reasons why the Philippines remains unattractive to foreign investors. Because of political instability which has plagued this country for so many years, economic growth has been stunted, making the country even more unattractive. A survey done in 1993 to determine the investment priorities of Japanese and U.S. companies showed that the Philippines' ranking was below the other ASEAN countries, excluding Brunei. Japanese companies ranked it lower than tenth while U.S. companies ranked it 10th among 12 Asian countries. In terms of country-risk, the Philippines was ranked 8th after Iraq, Russia, Brazil, Nigeria, Poland, Venezuela and Argentina. Indonesia was 16th; Thailand, 17th; Malaysia, 21st and Singapore, 25th.

Aside from the above problems, the Philippines also lacks in the necessary infrastructure to support foreign industries. This serves as another deterrent to foreign investment even if the Philippines is known to be abundant in natural resources and skilled labor.

5. RELATING FDI AND TRADE FLOWS

5.1 Data

A listing of U.S. and Japanese firms were taken from the list of top 500 corporations in the Philippines. These firms, although just a portion of the total number of U.S. and Japanese firms, dictate the trends in terms of sectors into which investments flowed.

Table 4 shows a sample of Japanese and U.S. investment flows into the different manufacturing sectors for the period 1982 - 1991. It can be noted from the table that majority of the investments flowed into the electrical machinery, other chemical products and transport. Japanese investments were primarily responsible for the sizeable amount of investments into the electrical machinery and transport sectors while U.S. investments accounted for a large portion of investments in the other chemical products sector.

5.2 FDI and Imports and Exports

Foreign affiliates which set up base in the host country are meant to produce either for the domestic market, in which case they may substitute for imports, or increase the export levels of the host country. The experience of the Philippines with FDI was that the production of the foreign affiliates was geared more towards the domestic market rather than the export market. Although complete data on exports of foreign affiliates are difficult to come by, data on U.S. multinational companies for years 1982, 1986, 1987 and 1989 show that the ratio of the exports of these companies to total exports of

Table 4. U.S. and Japanese Investment Flows

CATEGORY	JAPANESE INVESTMENT		U.S. INVESTMENT	
	P (Pesos)	\$ (Dollar)	P (Pesos)	\$ (Dollar)
Food	10,798,771	389,071	239,182,821	8,617,555
28 Proc. fruits	10,798,771	389,071	220,507,083	7,944,684
34 Sugar	0	0	211,164	7,608
37 Condiments	0	0	5,774,647	208,056
44 Soft drinks	0	0	12,689,927	457,207
Other Chem. Prods.	215,570,057	7,766,806	1,143,346,277	41,193,800
71 Drugs	7,724,330	278,301	434,124,824	15,641,150
72 Soaps, det.	0	0	641,059,266	23,096,824
73 Toilet prep.	148,496,502	5,350,203	0	0
74 Inks	4,904,094	176,690	0	0
75 Paints	0	0	1,172,558	42,246
77 Others	54,445,131	1,961,612	66,989,629	2,413,580
Fab. Metal Prods.	125,181,472	4,510,183	0	0
100 Other fab.	125,181,472	4,510,183	0	0
Machinery	36,038,830	1,298,449	208,885,433	7,525,966
103 Other spec.	0	0	203,885,443	7,345,820
105 Pumps	0	0	5,000,000	180,146
108 Others	36,038,830	1,298,449	0	0
Electrical Machinery	2,786,537,109	100,396,577	198,115,098	7,137,920
109 Motors & gen.	99,401,701	3,581,359	0	0
110 Trans. & dist.	13,998,500	504,354	0	0
111 Radio and TV	282,138,179	10,165,200	0	0
113 Semi-con.	0	0	105,030,374	3,784,156
114 Other elec. eq.	2,136,952,648	76,992,598	25,244,113	909,524
116 Wiring devices	251,731,463	9,069,672	67,840,611	2,444,240
117 Lighting fix.	2,314,618	83,394	0	0
Transport	620,951,887	22,372,372	298,634,089	10,759,534
121 Motor vehicles	620,951,887	22,372,372	298,634,089	10,759,534
Other Machinery	22,192,556	799,579	0	0
127 Scientific eq.	22,192,556	799,579	0	0

the Philippines ranged from between 8.4 percent and 12.9 percent only. A study by Aldaba (1994) substantiates this point. In trying to determine the relationship between exports and FDI, she established that the ratio of manufactured exports to total Philippine exports and FDI from the U.S., Japan and the EC were negatively related.

This means that FDI flows into the country produced for the domestic rather than the export market.

While foreign affiliates have very little effect on the exports of the country, the opposite is true in the case of imports. This is because the production processes of the foreign affiliates require significant amount of imports. The sectors into which large amounts of FDI flow into include the transport equipment sector and the electrical machinery sector which includes semi-conductors and electronics. As mentioned in Section 3.2, the foreign affiliates involved in these lines of business import the raw materials and just assemble them in the Philippines. A look at the Philippine skyline, shown in Figure 1, confirms the fact that these industries are import-dependent. The shaded portion of each column represents the amount imported by the sector. As can be observed, the chemicals and chemical products sector (13), the electrical machinery sector (19) and the transport equipment sector (21) import quite heavily.

5.3 Relating FDI and Source of Imports

Since FDI has an insignificant impact on exports while influencing to a large extent the import pattern of the Philippines, it is the latter that is looked into.

Table 5 shows the average percent share of imports of commodity j from the U.S. and Japan to total imports of commodity j for the period 1982-1991. The premise being established here is that direct investments from country A into sector j of country B will result in an increase in imports of country B from A of raw materials needed in producing the output of sector j . More specifically, it is expected that imports from sector j of country A will increase because most production processes are such that the main inputs to the process are from the sector itself.

It can be seen from Table 4 that the U.S. invested heavily in the chemicals and chemical products sector (essential oils, toilet preparations), the transport sector (other transport equipment) and the electrical machinery (semi-conductors) sector. A look at Table 5 shows that it is in these same three sectors (55, 77 and 79) that a large amount of imports are sourced from the United States. The same holds true in the case of Japan. A large portion of Japanese direct investment flowed into the transport (road vehicles) and electrical machinery (telecommunications) sector. And it is also from these two industries (78 and 76) that a large amount of Philippine imports came from Japan. This case is very evident in the transportation sector where almost 80 percent of imports are sourced from Japan.

6. CONCLUSION

This study tries to establish a relationship between foreign direct investment and trade flows. From the available data, it can be concluded that the amount and type of foreign direct investment can affect direction and volume of trade.

Given that foreign direct investment has, in the last decade, been gaining importance as a source of capital, further studies on its effects on direction and volume of international trade should be carried out.

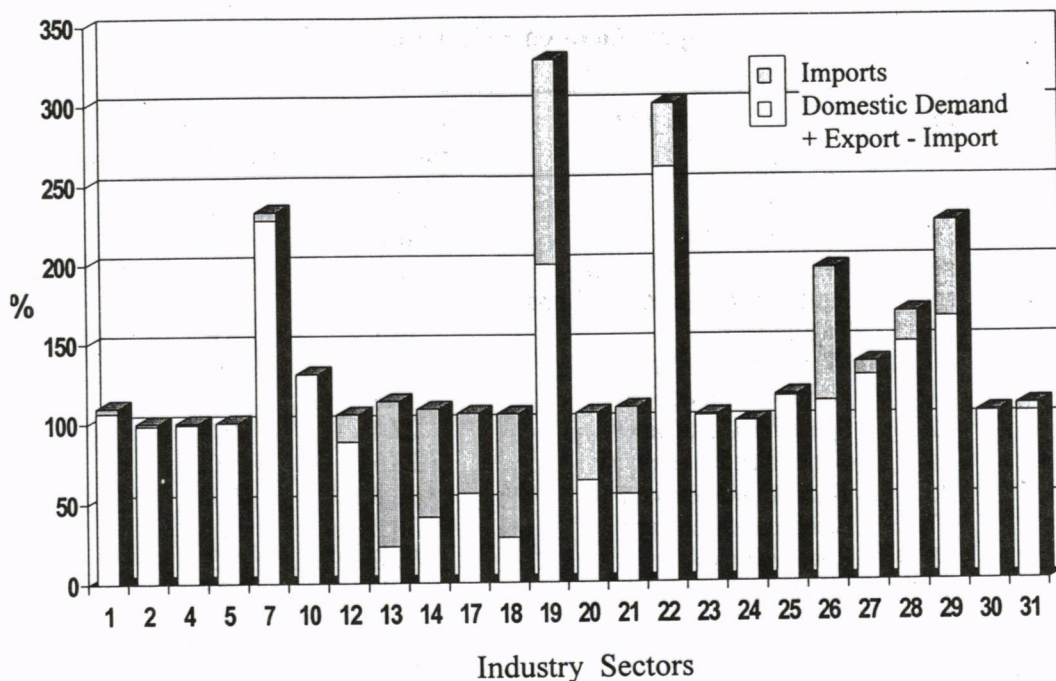


Figure 1 : Skyline of the Philippines, 1985

- | | |
|--|----------------------------------|
| 1 - Food Manufacture | 16- Basic Metals |
| 2 - Logging | 17- Fabricated Metals |
| 3 - Mining | 18- Machinery |
| 4 - Beverage | 19- Electrical Machinery |
| 5 - Tobacco | 20- Transport Equipment |
| 6 - Textiles | 21- Other Machinery |
| 7 - Apparel and Footwear | 22- Other Manufacturing Products |
| 8 - Leather Products | 23- Construction |
| 9 - Wood | 24- Electricity, Gas, and Water |
| 10- Furniture | 25- Trade |
| 11- Paper | 26- Hotel and Restaurant |
| 12- Printing and Publishing | 27- Transportation |
| 13- Chemicals and Chemical Products | 28- Communication |
| 14- Petroleum Products and Coal | 29- Financial Services |
| 15- Non- metallic Mineral Manufactures | 30- Real Estate |
| | 31- Other Services |

Table 5. Import Ratios on a Commodity Basis

Division	Description	% Imported from Japan	% Imported from U.S.
33	Petroleum	0.3	0.7
54	Medical products	6.4	15.7
55	Oils, toilet preparations	8.9	32.9
58	Plastic in non-primary forms	22.8	31.2
65	Textile yarn	14.1	4.8
69	Manufactures of metals	30.3	24.3
71	Power gen. machinery	43.8	21.9
72	Specialized machinery	27.4	23.4
74	Generalized machinery	28.5	27.2
76	Telecommunications	32.8	21.2
77	Electrical machinery	30.2	35.6
78	Road vehicles	79.8	9.3
79	Other transport equipment	6.1	38.5
84	Articles of apparel	6.1	14.4
87	Professional, scientific, controlling equipment	22.8	35.3

Source: Foreign Trade Statistics of the Philippines

REFERENCES

- Central Bank of the Philippines (1992) Selected Philippine Economic Indicators. Central Bank of the Philippines, Manila.
- Chen, E.K.Y. (1993) Foreign Direct Investment in East Asia. *Asian Development Review* 11, 24-59.
- Dasari, D. (1972) Balance of Payments Effects of Direct Foreign Investment: A Case Study of the Philippines (Ph.D. dissertation, New York University).
- Dohner, R.S. and Intal, P., Jr. (1989) Debt Crisis and Adjustment in the Philippines. In J.D. Sachs (ed.), *Developing Country Debt and Economic Performance*. University of Chicago Press, Chicago.
- Hirschman, A.O. (1958) *The Strategy of Economic Development*. Yale University Press, New Haven.
- Japan External Trade Organization (1993) JETRO White Paper on Foreign Direct Investment, Manila.
- Kobayashi, S. (1994) New Bold Approach to Promote Foreign Direct Investment in the Philippines, (manuscript).

- Lever, W.F. (1980) Manufacturing Linkages, Industrial Dynamics and the Transmission of Growth. **Regional Science and Urban Economics** 10, 491-502.
- National Statistics Office (1992) 1992 Philippine Yearbook, National Statistics Office, Manila.
- Stewart, J.C. (1976) Linkages and Foreign Direct Investment. **Reg. Studies** 10, 245-258.
- Subido, C. (1975) Determinants of Direct Foreign Investment in the Philippines (Ph.D. dissertation, University of the Philippines).
- Virata, C. (1972) Foreign Investment in Developing Countries: The Philippines. In P. Drysdale (ed.), **Direct Foreign Investment in Asia and the Pacific**. University of Toronto Press, Toronto.
- Yamazawa, I. (1970) Intensity Analysis of World Trade Flow. **Hitotsubashi Journal of Economics** 10, 61-90.
- Yamazawa, I. (1971) Structural Changes in World Trade Flows. **Hitotsubashi Journal of Economics** 11, 11-21.
- Yamazawa, I., et. al. (1993) Dynamic Interdependence among the Asia-Pacific Economies, The Keizai Bunseki No. 129, Economic Research Institute, Economic Planning Agency, Tokyo.
- Yue, C.S., (1993) Foreign Direct Investment in ASEAN Economies. **Asian Development Review** 11, 60-102.