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AN EXERCISE IN
PHILIPPINE INDUSTRY PRIORITIZATION

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An Exercise in
Philippine Industry Prioritization

Executive Summary

Multiple development objectives and imperfect markets are two reasons that can be advanced for industry prioritization in a developing country. This paper attempts to prioritize Philippine industries based on various quantitative criteria reflective of development objectives and economic considerations and to examine the relationships between criteria as they are used in the industry rankings. Previous multi-criteria industry prioritization exercises in the Philippines have primarily been qualitative.

The rankings are done for a 120-sector disaggregation of manufacturing industries and a 27-sector disaggregation of other non-mining secondary sectors and tertiary sector industries. The criteria used and their respective indicators or measures based on available data are as follows:

A. Employment Generation or Labor Intensity Criteria

- Wage Intensity - Ratio of value of compensation of employees to value of total inputs
- Capital-Labor Ratio I - Replacement value of capital per worker
(for manufacturing industries)
- Capital-Labor Ratio II - Book value of fixed assets per worker
(for other secondary and tertiary sector industries)

B. Factor Productivity and Efficiency Criteria

- Labor Productivity I - Census value added per worker
(for manufacturing industries)
- Labor Productivity II - National accounts value added per worker
(for other secondary and tertiary sector industries)
- Capital Efficiency I - Ratio of census value added to book value of fixed assets
(for manufacturing industries)
- Capital Efficiency II - Ratio of national accounts value added to book value of fixed assets
(for other secondary and tertiary sector industries)

- Energy Efficiency - Ratio of value of inputs of petroleum and petroleum products, electricity and gas to value of primary inputs
- Domestic Resource Cost (DRC-for manufacturing industries) - Ratio of domestic cost per unit of product to the difference between world price and foreign cost per unit.
- C. Backward Linkages - Power of Dispersion Index (extent to which an industry buys inputs from other industries)
- D. Market Orientation Criteria
 - Forward Linkages - Index of Sensitivity (extent to which an industry sells inputs to other industries)
 - Export Orientation - Ratio of value of exports to total output
 - Import Dependence (for manufacturing industries) - Ratio of value of direct import requirements to total output
 - Domestic Market Demand - Ratio of total intermediate and domestic demand to total output

Since different data sets are used for some of the criteria for the manufacturing industries and the other secondary and tertiary sector industries, e.g., capital-labor ratio I versus capital-labor ratio II, the two industry groups could not be ranked together. The main source of data is the 120-sector disaggregation of the 1974 Input-Output (I-O) Accounts of the Philippines. Other sources of primary data are the 1974 Annual Surveys of Establishments (ASEs) of the National Census and Statistics Office (NCSO). Data for most of the non-I-O generated criteria for 1974 were already available from previous studies. Considering the slow pace of technological change in this country, the results of the study may be considered relatively up-to-date.

Industries are ranked highest to lowest for values of wage intensity, labor productivity I, labor productivity II, capital efficiency I, capital efficiency II, backward linkages, forward linkages, export orientation and domestic market demand. The opposite is done for capital-labor ratio I, capital-labor ratio II, energy efficiency, DRC and import dependence. Energy efficient industries would have lower ratios of energy inputs to primary inputs while more competitive industries would have lower DRCs. Since data are unavailable for some industries for some of the criteria and to be able to compare an industry's standing across two or more criteria, the percentile ranks are computed from the assigned ranks, i.e., the higher the rank the closer the value to 100%. Within each of the criteria groups,

the unweighted average of the percentile ranks is obtained. The overall rank is the weighted average of the unweighted average of percentile ranks for each of the four groups of criteria using the following weights:

labor intensity	-	.30
factor productivity and efficiency	-	.30
backward linkages	-	.30
market orientation	-	.10

To see how the criteria are in agreement in ranking the industries and to see whether relationships between criteria exist and are of the expected direction, rank correlation analysis is undertaken.

The top 30 of the 120 manufacturing industries and their overall percentile ranks are as follows:^{1/}

<u>I-0 Code</u>	<u>Industry</u>	<u>Overall Percentile Rank^{1/}</u>
42	Footwear, except rubber and plastic	75.3
43-1	Ready-made clothing	72.9
43	Other wearing apparel	68.9
53-2	Leather products except footwear and other wearing apparel	68.2
44-2	Other made-up textile goods	67.7
44-1	Manufactures of embroidered products	67.7

^{1/} In the process of preparing the annex tables, an error was detected in the assignment of ranks for industries with equal values under some criteria, i.e., ties. The error is not consistent. For example, in one case, three out of the nine industries with the same criterion value were accorded an equal rank while the rest also had an equal, but different, rank value. However, in another case, eighteen industries with equal criterion values were all accorded the same rank. The extent to which this error affects the results will not be known unless a re-examination of the computer program used is conducted. When different ranks for tied values occur, the different rank appears to be no greater than the next higher or next lower rank. However, if the distortion is present, it increases with the number of ties and is magnified in the computation of percentile ranks. Consequently, some industries may be accorded a higher position in the overall rankings than they would actually have, while the opposite is true for those with presently low positions. Since the assigned ranks are the bases for the rank correlation analysis, the rank correlation results are accordingly affected. Annex Tables 3 to 6 are free from this error and may be used by the investigator interested in only a few criteria.

<u>I-O Code</u>	<u>Industry</u>	<u>Overall Percentile Rank^{1/}</u>
76-1	Metal cans, boxes and containers	67.5
74	Structural metal products	66.7
75	Heating apparatus, lighting and plumbing fixtures	65.9
41-1	Cordage, twine and net industries	65.6
53-1	Tanning and leather finishing	64.8
92-10	Miscellaneous manufactures, n.e.c.	64.4
80	Office, computing and accounting machines, excl. electrical	63.8
41-2	Carpets, rugs and linoleum including mats	63.7
78	Special industry machinery	63.3
72	Basic non-ferrous metal industries	63.1
92-4	Measuring, controlling, scientific equipment	62.7
76-2	Stamped, coated and engraved metal products	62.6
92-5	Medical, orthopedic and surgical supplies	62.4
47	Furniture and fixtures	62.4
41-3	Other textile products	62.3
76-3	Fabricated wire products	62.2
65-2	Insecticides, germicides and agricultural chemicals	61.5
31-1	Fish canning	61.3
92-6	Photographic and optical goods	60.9
92-2	Musical instruments	60.9
81-1	Electrical distribution and control apparatus	60.9
65-3	Other chemical products	60.9
63	Medicinal and pharmaceutical preparations	60.9
54	Rubber footwear	60.7

The top 7 of the 27 other non-mining secondary and tertiary sector industries are as follows:

<u>I-O Code</u>	<u>Industry</u>	<u>Overall Percentile Rank^{1/}</u>
97	Construction	72.5
114	Advertising services	65.9
119	Personal services	63.3
108	Services incidental to transport	63.1
115	Other business services, n.e.c.	62.7
113	Professional services	61.6
93	Scrap	61.1

The rankings obtained permit decisions as to which industries are preferable over others given development objectives and economic considerations.

The statistically significant rank correlation results for manufacturing industries between criteria pairs are:

A. Positive correlation

- wage intensity and capital-labor ratio (ranked lowest to highest)
- wage intensity and energy efficiency
- wage intensity and DRC (ranked lowest to highest)
- wage intensity and import dependence (ranked lowest to highest)
- wage intensity and domestic demand
- capital-labor ratio (ranked lowest to highest) and capital efficiency
- capital-labor ratio (ranked lowest to highest) and energy efficiency
- capital-labor ratio (ranked lowest to highest) and DRC (ranked lowest to highest)
- capital-labor ratio (ranked lowest to highest) and export orientation
- capital-labor ratio (ranked lowest to highest) and backward linkages
- labor productivity and capital efficiency
- labor productivity and domestic demand
- labor productivity and forward linkages
- capital efficiency and backward linkages
- energy efficiency and DRC (ranked lowest to highest)
- energy efficiency and import dependence (ranked lowest to highest)
- DRC (ranked lowest to highest) and export orientation
- forward linkages and backward linkages

B. Negative Correlation

- wage intensity and forward linkages
- wage intensity and backward linkages
- capital-labor ratio (ranked lowest to highest) and labor productivity
- capital-labor ratio (ranked lowest to highest) and domestic demand
- capital-labor ratio (ranked lowest to highest) and forward linkages
- labor productivity and energy efficiency
- labor productivity and export orientation
- labor productivity and import dependence (ranked lowest to highest)
- labor productivity and backward linkages
- capital efficiency and import dependence (ranked lowest to highest)

- capital efficiency and forward linkages
- energy efficiency and domestic demand
- energy efficiency and forward linkages
- energy efficiency and backward linkages
- DRC (ranked lowest to highest) and forward linkages
- export orientation and domestic demand
- import dependence (ranked lowest to highest) and domestic demand
- import dependence (ranked lowest to highest) and forward linkages
- import dependence (ranked lowest to highest) and backward linkages
- domestic demand and backward linkages

The following are the significant rank correlation results for other secondary and tertiary sector industries between criteria pairs:

A. Positive correlation

- wage intensity and domestic demand
- wage intensity and forward linkages
- capital-labor ratio (ranked lowest to highest) and capital efficiency
- capital-labor ratio (ranked lowest to highest) and energy efficiency
- capital-labor ratio (ranked lowest to highest) and forward linkages
- capital efficiency and energy efficiency
- energy efficiency and domestic demand
- export orientation and forward linkages

B. Negative correlation

- wage intensity and labor productivity
- wage intensity and backward linkages
- capital-labor ratio (ranked lowest to highest) and labor productivity
- labor productivity and export orientation
- labor productivity and forward linkages
- capital efficiency and backward linkages
- energy efficiency and export orientation
- energy efficiency and forward linkages
- energy efficiency and backward linkages
- export orientation and domestic demand

The relationships between the various criteria are mainly of the expected nature and, if contrary to expectations, are sufficiently understandable. Since there are about as many criteria pairs exhibiting positive correlation as there are criteria pairs which are negatively correlated, the study confirms theory that various development objectives can be quite separate. In the case of positive correlation, the criteria do support each other. In the

case of negative or lack of correlation, the convenient conclusion is that there is more reason for adopting the criteria to produce industry rankings reflective of various considerations. Since the verified inverse rank correlations are nowhere near perfect, the rankings do not cancel out each other. It is perhaps significant that notwithstanding the divergence of development objectives, quantitative multi-criteria industry prioritization can be undertaken when a country's statistical system is sufficiently developed. While a relatively sophisticated statistical system may be a luxury to a developing country, the information that such a system generates can be put to good use.

Depending on specific objectives, results of the study may be used accordingly. For example, if the policy concern or program objective is to promote efficiency, then only the productivity and efficiency rankings will be used. If export orientation is the primary concern, that can be done too. The criteria interrelationships may also be further examined to see if, with more disaggregated and complete data, fewer indicators will be sufficient to achieve similar results. The weights can also be changed for each criterion depending on the ranking objective and the relationships between criteria and goals.

This study can benefit from the following refinements:

1. Utilization of more disaggregated and updated information such as the 1974 240-sector I-O, the 1978 update of the 1974 60-sector I-O, and the forthcoming 1980 120-sector I-O;
2. Estimation of direct and indirect employment effects and more recent and disaggregated non-I-O-generated criteria that can be prepared from available primary data;
3. Adoption of statistical techniques that would permit better identification of which criteria are more important than others in prioritizing industries; and
4. Introduction of a regional dimension or use of location specific information.

The study should also be updated as other new information become available for purposes of industrial policy evaluation.

An exercise in quantification admittedly has its limits. As in any progressive effort, the marginal utility from a quantitative analysis will be outweighed by its marginal cost at some point. Also, not all industry selection criteria lend to quantification. Hence, the realistic application of the results of a study such as the present one should include difficult-to-quantify as well as qualitative criteria.

An Exercise In Philippine Industry Prioritization

1. Introduction and Background

The need for industry prioritization in a developing country arises from two major factors: the multiplicity of development objectives and the prevalence of imperfect markets. This paper was initially prepared in response to a need to determine the priorities for industries that should receive assistance under an AID-assisted Small and Medium Enterprise Development Project of the Government of the Philippines. However, the study (or its revision) may equally be useful in investment allocation decisions and other government industry assistance programs. This paper also examines the relationships between various criteria which reflect major considerations in industry prioritization. Mainly because of data availability constraints, the study is far from complete as it relies mostly on 1974 120-sector Philippine input-output (I-O) data for manufacturing and other secondary and tertiary sector industries. It should be redone based on new runs of more detailed 1974 I-O and surveys of establishments data at the National Census and Statistics Office or on 1980 I-O data as soon as these are available. As the study's methodological framework can easily accommodate new data, subsequent revisions can easily be undertaken to provide more useful and updated results. The flexibility of the framework also allows for addressing related considerations in industrial prioritization by examining relationships between criteria and specific goals in addition to those of the study's original objective.

2. Review of Literature and Related Activities

2.1 Review of Literature and Similar Exercises

Studies on industry prioritization in the Philippines are not few and this section may not be exhaustive. However, some effort was taken to get in touch with institutions most likely to have an interest in the subject. The foregoing is a discussion of the major pieces of study on determination of relative industry rankings.

The Bureau of Census and Statistics, now the National Census and Statistics Office, has conducted studies on industry characteristics for the years 1965 and 1969 to accompany the interindustry accounts or input-output (I-O) tables it had prepared for those years.^{1/} The analyses that have been done, however, were geared more toward illustrations of the application of inter-industry data and do not contain collective determinations of relative industry standings.

Ranis et. al. prepared a study^{2/} providing a sectoral breakdown of the 1965 I-O which distinguished between traditional and modern sectors, measured and analyzed major intersectoral linkages and estimated the direct and indirect employment effects resulting from given changes in the final demand for each sector's goods and services. The study found that traditional consumer goods have higher backward linkages than modern consumer goods and similarly for traditional services compared with modern services. Within the agricultural sectors, the export-oriented sectors (pineapple, sugar cane and logging), and meat and poultry production have significantly higher backward linkages than domestic food crops. In terms of direct employment effects, the traditional non-agricultural sectors were found to generate the most employment given an increase in final demand. Sectors found to have the least direct employment effects were finance, mining, modern services (i.e., professional services) and public utilities. These results simply reflect the very low productivity per worker in the traditional agricultural and non-agricultural sectors, whereas the opposite is true of the capital- or skill-intensive sectors. The total direct and indirect employment effects, however, were found in some cases to be substantially different from the direct effects. This was particularly true of those non-agricultural sectors which have strong backward linkages with agriculture.

A criterion in industry ranking which has been developed fairly recently is a measure of total efficiency and comparative advantage. Bautista and Tecson (1979) prepared industry domestic resource cost (DRC) estimates for 1969 and 1974 to determine relative industry standings according to

^{1/} Tito A. Mijares, The 1965 Interindustry Relations Study of the Philippine Economy, U.P. School of Economics - National Economic Council Workshop Series Paper No. 71-2, School of Economics, University of the Philippines, November 29, 1971.

1969 Interindustry (Input-Output) Accounts of the Philippines, National Census and Statistics Office, National Economic and Development Authority, undated.

^{2/} "Intersectoral Linkages and Direct and Indirect Employment Effects," Special Paper No. 19 in Gustav Ranis et. al., Sharing in Development: A Programme of Employment, Equity and Growth for the Philippines, International Labour Office, Geneva, 1974, pp. 659-677.

efficiency and comparative advantage considerations.^{3/} DRC indicates the amount of domestic resources used per unit of foreign exchange earned or saved from the production of a tradable good. As the authors point out:

"The utility of efforts to derive and analyze DRC estimates in the context of less developed countries (LDCs) where typically markets are highly distorted, stems from the valuation of domestic resources at accounting (shadow) prices to reflect social opportunity costs, and for small open LDCs, the explicit consideration of foreign exchange as a scarce factor. DRC analysis offers useful insights into the relative efficiency of sectoral investments and the international competitiveness of domestic industry. Moreover, the DRC measure can be interpreted in the ex-post sense to represent the social cost of promoting exports or of protecting import substituting industries under an existing policy regime. Information on industry DRCs therefore would be useful in the analysis of industrial promotion policies and could provide for policy formulation to the extent that efficiency in resource allocation and social costs associated with the protection or promotion of domestic industries are important areas of concern."

By comparing DRC estimates with the shadow exchange rate (SER), it can be determined whether an industry is efficient ($DRC/SER < 1$) or inefficient ($DRC/SER > 1$). The authors found a general rise in DRCs between 1969 and 1974. High cost industries were generally receiving heavy protection in 1974 while others efficient in saving or earning foreign exchange were effectively being penalized. Exporting industries were on balance relatively efficient in the use of domestic resources. Nevertheless, there were a few cases where low DRCs and effective protection rates coexisted. Here the clear suggestion is that the industries do not need the protection and are enjoying monopoly rents. Capital and labor productivity were found to be inversely correlated to DRC although factor intensity had no significant correlation with DRC. The latter finding indicates that the interindustry variation in DRCs lies not simply in the differences in relative amounts with which primary factors are combined but more importantly in the differences in efficiency at which the factors are being utilized. The significant relationship between DRC and each of the factor productivities would seem to suggest that factor productivities cannot be ignored in making national resource allocation decisions concerning manufacturing industries in the Philippines.

^{3/} Romeo M. Bautista and Gwendolyn R. Tecson, "Domestic Resource Costs in Philippine Manufacturing," Special Paper No. 5 in Romeo M. Bautista, John H. Power and Associates, Industrial Promotion Policies in the Philippines, Philippine Institute for Development Studies, 1979, pp. 293-308.

The following information on exercises in industry prioritization were obtained from interviews with various Philippine government institutions and from existing studies other than those previously discussed.

A NEDA-administered project^{4/} is in the process of identifying industries for industrial estates all over the country. Industries for specific locations have already been identified on a qualitative basis but a quantitative validation of the results is being done.

The University of the Philippines-Institute for Small Scale Industries (UP-ISSI) has identified industries related to investment opportunities for each province using a combination of quantitative and qualitative information. NEDA has, in fact, reviewed the results of the UP-ISSI findings for possible use in the industrial estates project mentioned above.

A study prepared for AID by Sycip, Gorres, Velayo and Co. (1980)^{5/} identified cottage industries suitable for development in Regions V, VI and VIII on the basis of labor intensity, capital requirements, product demand and entrepreneurial constraints and on-going development programs and projects using a combination of quantitative ranking procedures and qualitative observations. The study also described the government-assisted small and medium scale industries in the three regions.

In identifying projects for the Philippine Government's Investments and Exports Priorities Plans, the Board of Investments (BOI) makes use of four criteria based on estimates for an economic-sized operation or enterprise, namely: net present value, social benefit-cost ratio, economic internal rate of return and DRC. Historical export market performance and observed international trends are additional considerations for priority project identification. The latter criteria, labor intensity and the number of existing firms were used by the Ministry of Trade and Industry, with special emphasis on export market potential, in determining its seven priority sectors for cottage, small and medium industries. The identified priority sectors are: construction services, electronics, garments, fresh and processed foods, gifts and houseware, furniture, and footwear and leathercraft. Meanwhile, small and medium industry financial assistance programs assisted by the World Bank do not follow an industry prioritization scheme. Eligibility for assistance is determined on an individual project basis.

^{4/} The Nationwide Industrial Estate Program (NIEP).

^{5/} Sycip, Gorres, Velayo and Co., Rural Enterprise Development Study for Regions V, VI and VIII, Second Report on the Data Matrix, October, 1980.

2.2. Related Present and Future Activities on Philippine Industrial Promotion Policy

It will be helpful to provide a brief background on present Philippine industrial promotion policy.^{6/} In 1980, the Philippine Government initiated a program of reform designed to correct import-substitution and capital-intensive biases of the existing trade and industrial policies. The program aims at accelerating manufactured output and employment growth, sustaining the high growth of manufactured exports and increasing their backward linkages, promoting efficient import substitution and encouraging regional dispersal of industry. The first phase of the program consisted of major trade policy reforms funded by the Structural Adjustment Loan I (SAL I) from the World Bank. The objectives of the first phase are to increase the efficiency and international competitiveness of Philippine industry and to reduce allocative distortions by lowering the overall level of protection and evening out the spread in tariff rates within and between sectors. As continued import restrictions would defeat the tariff reform's objectives, liberalization of import licensing is being undertaken simultaneously. Complementing the tariff reform, the Philippine Government has also taken steps to improve the export regime through the introduction of various export promotion measures. Despite the international recession and the ensuing economic difficulties, implementation of the program has been good.

The future thrust of Philippine industrial promotion policy is indicated by the activities planned under the second World Bank Structural Adjustment Loan (SAL II). The major reform of the industrial incentives and promotion system aims at reducing remaining distortions and correcting market failures. This reform is intended to reduce government intervention and provide the private sector with clearer market signals. The reform will extend the principle of comparative advantage and industrial efficiency already embedded in the trade liberalization program to the areas of fiscal incentives, determination of eligibility for incentives and sector programs. The new incentives are related to industrial performance rather than investment per se and therefore the use of capital. The key criterion in determining eligibility will be the Philippines' prospective areas of longer-term comparative advantage.

As under the current system, BOI will prepare an annual priorities plan which lists activities eligible for incentives. BOI will undertake detailed economic analysis to determine priority areas for investment.

6/ From: The World Bank, Report and Recommendation of the President of the IBRD to the Executive Directors on a Proposed Loan in an Amount of US \$302.3 million to the Republic of the Philippines for a Second Structural Adjustment Loan, Report No. P-3389-PH, April 1, 1983.

In the future, BOI will use a more systematic approach in identifying broad activities for inclusion in the priorities plan compared with the current situation in which priorities are largely determined on a project by project basis.

Sector programs, as defined in the Government's concept paper, outline a strategy for the development of a particular industry over the medium term. A sector program will identify sector specific market failures and distortions and will describe appropriate policy responses to promote development of industrial activities in line with long-run comparative advantage and consistent with the overall industry and trade policy strategy. Sector programs are expected to provide key inputs for the identification of areas of activity to be included in the priorities plan based on subsectoral studies of comparative advantage and analysis of insitutional and policy constraints affecting particular activities. Moreover, they are intended to provide a sound basis for indicative planning whereby the Government, in collaboration with the private sector, will provide information about market prospects, technology developments and other areas of vital interest to both Government planners and private investors but which otherwise would not be generally available.

In January, 1983, a schedule and work program for the preparation of sector development programs for the country's 19 major industry groups was adapted. Several sector development programs mainly for the seven priority industries of the government were under preparation or about to be initiated as of April, 1983. These are the food processing, electronics, garments, leather and footwear, woodworking and furniture, and mechanical engineering industries. Two restructuring programs, for the cement and textile industries, are under implementation.

As these sector development programs would take time to develop, the need to determine priorities among major sectors and within sectors remains. At the same time, new developments will affect these priorities. The existing work on industry prioritization indicates that while there have been attempts to determine industry priorities on a quantitative basis, these were done using individual criteria. On the other hand, multi-criteria industry prioritization has been for the most part notional. It is not difficult to see that qualitative prioritization can present problems when applied to the entire spectrum of the economy's industrial activity, especially where a sufficient degree of industry specificity is required. The present paper therefore determines industry priorities using a multi-criteria quantitative approach while recognizing that the results are subject to qualifications attendant to circumstances of their use and application.

3. Quantitative Selection Criteria Identification

Development objectives indicate the following major considerations in industry resource allocation:

- employment generation,
- productivity and efficiency
- intersectoral linkages, and
- market orientation.

In identifying the quantitative selection criteria for this study, data availability and applicability to the study's objective were the major determining factors. Criteria corresponding to each of the four major considerations are discussed below.

3.1. Employment Generation Criteria

For this study, the criteria used for employment generation are wage intensity and factor intensity. An ideal criterion for the employment generation consideration is the direct and indirect employment effect which is the total employment generated by a change in final demand. This, however, requires estimates of employment-output ratios to be multiplied by the inverse matrix of technical coefficients of a suitable I-O table. Hence, substantial processing of the I-O matrices and other data on industry characteristics would be required which is not possible as the study utilizes mainly readily available data.

The next best choice for a criterion would be factor or labor intensity which is measured by the capital-labor ratio. There are two forms of this ratio based on the definition of capital. Capital may be defined as replacement value or as book value of fixed assets. As estimates for the capital-labor ratio based on the former are readily available from an existing publication for a sufficiently disaggregated number of manufacturing industries, these are used for the manufacturing sector. These estimates are preferred over estimates based on the alternative definition since these represent a theoretically closer approximation of factor intensity. Moreover, the latter are available only at a more aggregative level. For the other secondary and tertiary industries, the second definition is used to derive estimates from national accounts value added and book value of fixed assets.

Data for factor intensity according to both definitions, however, are not readily available for all industries. Hence, an additional measure for labor intensity for a sufficiently disaggregated industrial classification has to be used. This criterion is wage intensity which is the wages and salaries row of the matrix of technical coefficients of the I-O table. The matrix of technical coefficients is nothing more than the percent distribution of input values for each industry.

Extent of unorganized employment, which is the ratio of unorganized or household employment to total employment, was also initially considered as a criterion since a significant number of small establishments, if classified according to asset size, would have mainly household workers. This measure is not necessarily an indicator of labor intensity although it may be used to identify industries where micro and cottage enterprises account for a significant proportion of industry

employment. Therefore, this is not utilized in this study for ranking purposes. However, the relative extent is shown to indicate the probable micro nature of each industry.

3.2. Productivity and Efficiency Criteria

Productivity and efficiency may be viewed in several ways: primary input partial productivity or partial factor productivity (i.e., labor productivity and capital productivity or capital efficiency), intermediate input efficiency (i.e., efficiency in the utilization of a raw material), and international competitiveness and total efficiency. To reflect each of these facets of productivity and efficiency, the following measures were considered: total factor productivity, labor productivity, capital efficiency, energy efficiency, effective protection rate and domestic resource cost. For reasons that will be presented below, total factor productivity and effective protection rate were not included in the final criteria set.

A possible measure of total factor productivity using I-O data is the ratio of value added (or what is the same thing, the total value of primary inputs) to value of intermediate inputs (both domestic and imported goods and services) as recommended by the NCSO. Since value added is also equal to value of primary inputs, a conceptual problem arises in this regard. A sector having a large proportion of value of primary inputs relative to value of intermediate inputs would register a relatively higher level of productivity. Hence, total productivity, as defined here, cannot be used.

Estimates for two measures of factor productivity used in the study are readily available from a World Bank study and through quick calculations from NCSO publications at the PSIC (Philippine Standard Industrial Classification) two-digit level. More disaggregated information required a reconciliation of the 3-digit PSIC and the 120-sector I-O codes which was not possible given the limited time. This has been requested of NSCO and should be forthcoming. These measures are for labor productivity (census value added per worker for manufacturing industries and national accounts gross value added per worker for other secondary and tertiary sector industries) and capital efficiency (ratio of census value added to book value of fixed assets for manufacturing industries and ratio of national accounts value added to book value of fixed assets for other secondary and tertiary industries).

As energy has become an important consideration in industry efficiency, a criterion for energy efficiency is included in the analysis. Using an I-O table, this is defined as the ratio of value of inputs of the petroleum and petroleum products, electricity and gas industries to value added or value of primary inputs.

Finally, there should be a criterion for international competitiveness and efficiency. The effective protection rate (EPR) and DRC were both initially considered for this criterion. During the early stages of this exercise, it was observed that given the present tariff reforms, many industries will be forced to be more competitive in the next several years. Support for greater competitiveness may be done through assisting industries which are already or will soon be competitive in the world market. However, it is noted that effective protection rate only indirectly measures competitiveness and is no indicator of efficiency. Since Bautista and Tecson found DRC to be strongly and positively correlated with EPR, their DRC estimates are used as the main indicator for overall efficiency and competitiveness.

3.3. Intersectoral Linkages Criteria^{7/}

Both backward and forward linkages were considered in the array of criteria to rank industries. The backward linkage effect is defined as the degree of inducement an investment or a change in final demand can have on domestic production of inputs needed for that investment. A sector or project that purchases most of its inputs within the country will have a high backward linkage effect. Derived demand or backward linkage effect is measured by the power of dispersion index defined by

$$U_j = \frac{\sum_i^n r_{ij}}{\frac{1}{n} \sum_i^n \sum_j^n r_{ij}}$$

where the r_{ij} s are the elements of the inverse of the matrix of technical coefficients of an I-O table. The column elements of the inverse matrix of technical coefficients represent the direct and indirect output requirements for each industry induced by a unit increase in the final demand for a given industry's outputs. The sum of the column elements may be taken as a measure of the influence of the industry as a purchaser of outputs from the domestic system of industries. This sum expressed as a ratio to the average of the whole system is the power of dispersion index.

^{7/} The text of this section is adopted significantly from the analysis accompanying the 1969 Interindustry (Input-Output) Accounts of the Philippines, National Census and Statistics Office, NEDA, pp. 21 and 24.

The forward linkage effect is the degree to which the output of one industry is utilized by other industries in the economy for further production. The indicator for forward linkages is the index of sensitivity defined as:

$$U_i = \frac{\sum_j^n r_{ij}}{\frac{1}{n} \sum_i^n \sum_j^n r_{ij}}$$

This formula gives the ratio of the sum of the elements (r_{ij} s) along a row of the inverse matrix of technical coefficients to the average for all industries. The higher the value of U_i , the higher the forward linkage effect. This criterion can also be taken as a measure of direct and indirect intermediate demand and may thus be included among the market orientation criteria.

3.4. Market Orientation Criteria

In keeping with the Philippine Government's foreign exchange generation objective, industries may be ranked according to their export orientation and import dependence. For this study, export orientation is the ratio of the value of exports to total output for each industry. Import dependence is the ratio of direct imported input requirements to total output. An issue that arises in connection with export orientation is whether or not to permit the existence of a positive or negative export bias in the industry rankings. The export orientation bias is in accordance with the export promotion objective. However, given the multitude of programs supportive of export orientation, it may be appropriate to focus on the domestic market. Also, a strong domestic demand is desirable to insure investments against export market failures as currently being experienced in the Philippines. Thus, neither export nor domestic market focus should be favored. However, market potential should still be present. To effect market neutrality in the industry selection exercise, both export orientation and some criterion for domestic market orientation or potential are considered. The indicator used for the latter is domestic market demand which is the ratio of the total of domestic final demand and direct intermediate demand for the product of an industry to the value of the industry's production. Domestic final demand is the sum of consumption and investment expenditures on the industry's product and expenditures on imports of the same product. Domestic demand complements the forward linkage criterion which measures direct and indirect intermediate demand.

4. Data Sources and Methodology

4.1. Data Sources

The Interindustry or Input-Output Accounts of the Philippines (I-O) are very useful for the present study. These are available for the years 1961, 1965, 1969 and 1974. The published form of the 1974 I-O contains a disaggregation for 120 industries although a disaggregation for 240 industries is available at the NCSO for special purpose studies. A 1978 price update of the 1974 I-O for a disaggregation for 60 industries is also available. However, while the 1978 I-O may be useful for price-cost analysis, it is of limited dependability for this exercise because the technical coefficients are unstable. Considering the relatively slow pace of technological change in Philippine production, the 1974 I-O is nonetheless considered to be still adequately reflective of present interindustry relationships and is used as the principal source of primary data for this exercise. The other sources of primary data are the 1974 Annual Surveys of Establishments (ASEs) for manufacturing, construction, electricity, gas and water, wholesale and retail trade, transportation, communication and storage, insurance and real estate, and private services. Data for most of the non-I-O generated criteria were already available from two publications.^{8/}

It was not deemed practical for what is considered to be a surface exploration of industry ranking criteria to prepare independent estimates (though they may be based on officially generated raw data). It is in this light that there are limitations to the data as used in this study as follows:

- Incomplete observations for some criteria;
- Insufficient disaggregation resulting in a great number of ties for some criteria; and
- Rough approximations of certain criteria in adopting proxy indicators.

Despite these limitations, it is doubtful whether the results would be substantially different if estimates for more "theoretically superior" indicators were prepared. It is easier to appreciate the advantages that may be obtained from a more disaggregated set of industry information for all criteria especially for labor productivity, capital efficiency and forward and backward linkages.

^{8/} Barend de Vries et. al., Industrial Development Strategy and Policies in the Philippines, Vol. III, Report No. 2513-PH, The World Bank, October 29, 1979.

Romeo M. Bautista, John H. Power and Associates, Industrial Promotion Policies in the Philippines, Philippine Institute for Development Studies, 1979.

The industries are classified according to the 1974 120-sector I-O code since this I-O is the source of the greater number of criteria. For criteria using more aggregative information, the subsectors within the same sector are assigned the same values. Where data are available for at least one indicator or criterion for all subsectors within a sector, the broader sector classification is not listed. All in all, there are 147 sectors and subsectors for this exercise, of which 120 are manufacturing industries and 27 are other non-agricultural and non-mining industries (or other secondary and tertiary sector industries). Since different data sets are used for some of the criteria for the manufacturing industries and the other secondary and tertiary sector industries, the two industry groups could not be ranked together.

At this point, it may be useful to review the definitions for all criteria and identify their specific data sources. The criteria are grouped according to four major considerations.

<u>Criterion</u>	<u>Indicator or Measure</u>	<u>Data Source(s)</u>
A. Labor Intensity		
1. Wage Intensity	Ratio of value of compensation of employees to value of total inputs	1974 120-sector I-O Matrix of Technical Coefficients (Producers' Prices), NCSO
2. Capital-Labor Ratio I (for manufacturing industries)	Replacement value of capital per worker	Estimates by Norma Tan in her Ph. D. Dissertation as contained in Table 2.2, Vol. III, <u>Industrial Development Strategy and Policies in the Philippines</u> , World Bank Report No. 2513-PH
3. Capital-Labor Ratio II (for other secondary and tertiary sector industries)	Book value of fixed assets per worker	1974 Annual Surveys of Establishments (ASEs), NCSO

<u>Criterion</u>	<u>Indicator or Measure</u>	<u>Data Source(s)</u>
B. Factor Productivity and Efficiency		
1. Labor Productivity I (for manufacturing industries)	Census value added per worker	Table 1-9, Vol. III, World Bank Report No. 2513-PH (based on 1974 ASE for manufacturing establishments with 5-19 workers) ^{9/}
2. Labor Productivity II (for other secondary and tertiary sector industries)	National accounts value added per worker	1974 gross value added (GVA) estimates, NEDA National Accounts Staff (NAS) and 1974 ASEs for number of workers
3. Capital Efficiency I (for manufacturing industries)	Ratio of census value added to book value of fixed assets	Table 1-9, Vol. III, World Bank Report No. 2513-PH (based on 1974 ASE for manufacturing establishments with 5-19 workers) ^{9/}
4. Capital Efficiency II (for other secondary tertiary sector industries)	Ratio of national accounts value added to book value of fixed assets	1974 GVA estimates, NEDA-NAS and 1974 ASEs for book value of fixed assets
5. Energy Efficiency	Ratio of value of inputs of petroleum and petroleum products, electricity & gas to value of primary inputs	1974 120-sector I-0 (Producers' Prices), NCSO
6. Domestic Resource Cost (for manufacturing industries)	Ratio of domestic cost per unit of product to the difference between world price and foreign cost per unit	Estimates by Bautista and Tecson in Bautista and Power, <u>Industrial Promotion Policies In the Philippines</u>

^{9/} Obtained by subtracting totals for establishments with 20 or more workers from totals for establishments with 5 or more workers. These data are used because the project for which this study was conducted is intended to assist small and medium industries. Ideally, data for establishments with 5 to 199 workers should be used.

<u>Criterion</u>	<u>Indicator or Measure</u>	<u>Data Source(s)</u>
C. Backward Linkages	Power of Dispersion Index (extent to which the industry buys inputs from other industries)	Computed by NAS-NEDA and NCSO from the 1974 60-sector I-0
D. Market Orientation		
1. Forward Linkages	Index of Sensitivity (extent to which the industry sells inputs to other industries)	Computed by NAS-NEDA and NCSO from the 1974 60-sector I-0
2. Export Orientation	Ratio of value of exports to total output	Computed from the 1974 120-sector I-0
3. Import Dependence (for manufacturing industries)	Ratio of direct import requirements to output	Computed by N. Tan from unpublished import matrix tables of the 1974 I-0 as contained in Table 1.11, Vol. III, World Bank Report No. 2513-PH
4. Domestic Market Demand	Ratio of total intermediate and domestic final demand to total output	Computed from the 1974 120-sector I-0

It should be noted that there are eleven criteria for the manufacturing industries and nine for the other secondary and tertiary sector industries, DRC and import dependence data not being readily available for the latter.

Extent of unorganized employment data which is the ratio of the number of household workers to total employed is sourced from 1974-1975 NCSO data as contained in Table 1.28, Vol. III, World Bank Report No. 2513-PH. Raw data for all indicators are shown in Annex Tables 1 and 2.

4.2. Methodology

Given these criteria, the over-all ranking of industries is obtained through the following procedures.

All industries for which data are available for each criterion are ranked according to either highest to lowest or lowest to highest (raw data) values regardless of relative differences in magnitudes. Industries are ranked highest to lowest for values of wage intensity, labor productivity I, labor productivity II, capital efficiency I,

capital efficiency II, backward linkages, forward linkages, export orientation and domestic market demand. The opposite is done for capital-labor ratio I, capital-labor ratio II, energy efficiency, DRC, and import dependence. The reasons for assigning higher ranks to lower values of these indicators are as follows. A relatively higher capital-labor ratio means that an industry is relatively less labor intensive and therefore, less priority should be given it. Energy efficient industries would have a lower ratio of energy inputs to total primary inputs. More competitive industries would have a lower DRC. Less import dependent industries would have a low ratio of direct imported input requirements to total output. In the case of ties, the rank assigned to industries with the same criterion values is the average of the ranks they would have received if they had all been different. The next industry with a value different from the tied industries is assigned a rank it would receive had the ranks of the tied industries been different. These are standard ranking procedures.

To account for unavailability of data for some industries for some of the criteria (e.g., DRC, import dependence, capital-labor ratio I, and capital-labor ratio II), and to be able to compare an industry's standing across two or more criteria, the percentile ranks are computed from the assigned ranks^{10/}. Within each of the groupings, the

^{10/} The percentile rank is computed as follows:

$$P.R. = (n - R + 0.5) (100/n)$$

where n = number of industries

R = assigned rank of the industry

It can be deduced that an industry with an assigned rank closer to 1 would have a percentile rank closer to 100.

To illustrate the computation of percentile ranks, the following example is presented:

<u>Industry</u>	<u>Value of Criterion k</u>	<u>R (highest to lowest)</u>	<u>PR</u>
A	2.33	1	96
B	2.15	2	88
C	2.05	3	78
D	1.95	4	71
E	1.80	6	54
F	1.80	6	54
G	1.80	6	54
H	1.65	8	38
I	1.55	9.5	25
J	1.55	9.5	25
K	1.50	11	12
L	1.35	12	4

Because of a computer error in the assignment of ranks for some industries with ties as discussed in footnote 12, the computed percentile ranks are likewise affected where ties are present.

unweighted average of percentile ranks is obtained. The overall rank is the weighted average of the unweighted average of percentile ranks for each of the four groups of criteria using arbitrarily determined weights as follows:

labor intensity	.30
factor productivity and efficiency	.30
backward linkages	.30
market orientation	.10

It is believed that the chosen weights are adequately reflective of the project's main objective of productive employment. Since the rankings are supposed to be market orientation-neutral, a low weight is given to market orientation.

The overall ranks for the manufacturing industries (see Table 1) are thus determined by computing the weighted average of the following:

labor intensity - unweighted average of percentile ranks of wage intensity and capital-labor ratio I (weight = .30);

factor productivity and efficiency - unweighted average of percentile ranks of labor productivity I, capital efficiency I, energy efficiency and domestic resource cost (weight = .30);

backward linkages percentile ranks (weight = .30); and

market orientation - unweighted average of percentile ranks of export orientation, import dependence, domestic market demand and forward linkages (weight = .10)

The same procedure is done for the other secondary and tertiary sector industries (Table 2) except that capital-labor ratio I is replaced by capital-labor ratio II, labor productivity I is replaced by labor productivity II, capital efficiency I is replaced by capital efficiency II, and domestic resource cost and import dependence are not included in the absence of estimates for these industries.

To see how the criteria are in agreement in ranking the industries and to see whether relationships between criteria are of the expected direction and are in accordance with findings of previous studies, rank correlation analysis is undertaken. Two rank correlation statistical tests are used: Kendall's coefficient of concordance (W) for 3 or more criteria within groupings and between 3 or more groupings, and Spearman's rank correlation coefficient for all criteria taken two at a

time^{11/}. In both cases, the formulas used include correction for ties. The coefficient of concordance is tested for significance through X^2 with $n - 1$ degrees of freedom while the t-test is used for Spearman's rank correlation coefficient with $n - 2$ degrees of freedom.

5. Results of Application of Quantitative Criteria^{12/}

5.1. Industry Rankings

The industry ranking results are shown in Tables 1 to 5 attached at the end of the text. For the 120 manufacturing industries, it is interesting to note that the top thirty includes many of the industries belonging to the seven priority sectors of the Ministry of Trade and Industry such as footwear, leather products, garments, furniture and

^{11/} W bears a linear relation to the average Spearman rank correlation coefficients taken over all groups. If there are k criteria, and if r_{sav} is the average of the Spearman rank correlation coefficients

between $\binom{k}{2}$ possible pairs of rankings, it can be shown that

$$r_{sav} = \frac{kW - 1}{k - 1}.$$

The Spearman rank correlation coefficient is used in industry rank correlation analyses such as the present one instead of the most powerful parametric correlation, the Pearson correlation coefficient, because the proper use of the latter requires several assumptions, among others, that the population has a bivariate normal distribution.

^{12/} In the process of preparing the annex tables, an error was detected in the assignment of ranks for industries with equal values under some criteria, i.e., ties. The error is not consistent. For example, in one case, three out of the nine industries with the same criterion value were accorded an equal rank while the rest also had an equal, but different, rank value. However, in another case, eighteen industries with equal criterion values were all accorded the same rank. The extent to which this error affects the results will not be known unless a re-examination of the computer program used is conducted. When different ranks for tied values occur, the different rank appears to be no greater than the next higher or next lower rank. However, if the distortion is present, it increases with the number of ties and is magnified in the computation of percentile ranks. Consequently, some industries may be accorded a higher position in the overall rankings than they would actually have, while the opposite is true for those with presently low positions. Since the assigned ranks are the bases for the rank correlation analysis, the rank correlation results are accordingly affected. Annex Tables 3 to 6 are free from this error and may be used by the investigator interested in only a few criteria.

fixtures, some gifts and houseware industries, some electronics industries, and at least one food processing industry. It is also significant that some miscellaneous manufactures which have contributed to non-traditional export earnings in recent years are among the leading industries. Metal fabricating industries also rank high in the list.

The footwear (except rubber and plastic), ready-made clothing, other wearing apparel, leather products, other made-up textile goods, manufactures of embroidered products, and tanning and leather finishing industries rank very high because of their labor intensity and backward linkages. Each of these industries has a percentile rank of at least 65 for labor intensity and backward linkages. Several of the industries which do well in both labor intensity and factor productivity are the miscellaneous manufactures, namely: office, computing and accounting machines (non-electrical); measuring, controlling and scientific equipment; medical, orthopedic and surgical supplies; photographic and optical goods; musical instruments; and other miscellaneous manufactures. Other industries which rank high also because of labor intensity and factor productivity and efficiency are special industry machinery, and electrical distribution and control apparatus. Twelve industries rank high mainly because of backward linkages. There are metal cans, boxes and containers; structural metal products; heating apparatus, lighting and plumbing fixtures; cordage, twine and net industries; carpets, rugs and linoleum; basic non-ferrous metal industries; stamped, coated and engraved metal products; other textile products; fabricated wire products; other chemical products; medicinal and pharmaceutical preparations; and rubber footwear. On the other hand, high ranks on factor productivity and efficiency and backward linkages are found for insecticides, germicides and agricultural chemicals. Furniture and fixtures and fish canning rank high mainly because of labor intensity.

Among the industries mentioned above, those with high ranks in market orientation (at least a percentile rank of 50) are cordage, twine and net industries; carpets, rugs and linoleum; special industry machinery; basic non-ferrous metal industries; measuring, controlling, scientific equipment; other textile products; insecticides, germicides and agricultural chemicals; fish canning; electrical distribution and control apparatus; other chemical products; and medicinal and pharmaceutical preparations.

Among the lowest thirty are the agri-based industries. These industries are among the least labor intensive as shown by their percentile rank values for labor intensity. If it were possible to measure these industries' direct and indirect employment effects following the methodology of Ranis et. al., ^{13/} their rankings might change. However,

^{13/} Op. cit. As mentioned, the authors found different indirect employment effects for some non-agriculture industries which have strong backward linkages with agriculture as compared to their direct employment effects.

it is unlikely that the changes would substantially affect the rankings since these industries registered only average ranks in backward linkages and below average ranks in factor productivity and efficiency. The low rankings of agri-based industries is unfortunate considering the predominance of resource-based industries in most areas outside Metro Manila. Nonetheless, the relative rankings still indicate which industries should be given priority over others in meeting the industry assistance objectives notwithstanding the fact that many of industries in a particular region may fall in the lower end of the rankings. Thus, for example, canned fruits and vegetable products should be given priority over corn milling.

Also among the lowest thirty industries are the import (energy or other inputs) dependent industries such as transport equipment, petroleum, glass and some other intermediate goods industries. The low rankings of these industries are mainly brought about by their low backward linkages, and in some cases, their high capital intensity.

Of the top quartile of 30 manufacturing industries in Table 1, nineteen industries have household workers accounting for over half of total employment. The other eleven industries have household workers accounting for at least two-fifths of total employment. Despite the limitations from relatively more aggregative information on extent of unorganized employment data used for the study, it would seem that any micro and cottage industry development program could adopt the same priorities presently indicated.

In Table 2, it will be noted that construction tops the list of other secondary and tertiary sector industries followed by business and personal services. Bearing in mind that the study uses 1974 data, it is significant that construction would top the list even without the benefit of a large export market which has faced the industry in the latter half of the seventies. At the lower end of the scale are the energy-intensive utilities and hotels and other lodging places. It is also significant that even in 1974 (prior to the hotel boom which probably contributed to the hotel industry's present distressed situation), hotels and other lodging places already rate poorly based on the criteria.

Among the top seven industries, construction, services incidental to transport and scrap show high rankings in factor productivity and efficiency and backward linkages. On the other hand, labor intensity and factor productivity and efficiency account for the high percentile ranks of advertising services and personal services. The high rank of professional services and other business services is mainly due to their labor intensity. Of these seven industries, the highest ranking in terms of market orientation are advertising services, professional services and other business services.

Of the 7 lowest ranking industries, water transport, gas, electricity and hotels and lodging places are pulled down by their capital intensity and low ranks in factor productivity and efficiency. The hotels and lodging places industry also ranks low in backward linkages. Real estate ranks low due to low labor intensity and backward linkages. Meanwhile, the low backward linkages of wholesale trade and communication account for their low over all standing. Nonetheless, wholesale trade and hotels and other lodging places do relatively well in market orientation.

Tables 3, 4 and 5 provide separate rankings of industries listed in Table 1 for consumer goods, intermediate goods and capital goods industries, respectively, based on their initially determined ranks in the entire manufacturing sector. This breakdown is provided to facilitate identification of priority manufacturing industries when classified according to end-use of their products.

There is no attempt at this point to determine which criteria are the more important determinants of industry standings. On one hand, it will be noted that when industries have high percentile ranks for any two of three major criteria groups accorded a weight of .30 each, they will have a higher overall standing. This is so because any two of these three groups account for .60 of the weight in the ranking. Thus, for example, it is sufficient for an industry to do well on labor intensity and backward linkages to come out high in the rankings provided it does not get a relatively low rank in productivity. On the other hand, an above average percentile rank for all major criteria groups would still put an industry in a good position. As more disaggregated data become available, it would be useful to perform an exercise that would be able to identify which criteria are more important than others.

5.2. Rank Correlation Results

Computed coefficients of concordance are not for the most part significant either for rankings within groups (with 3 or more criteria) and average rankings between at least 3 groups. These results may be interpreted as follows. Each criterion represents separate considerations or sub-considerations which are not necessarily consistent with one another. Lack of significant correlation may be taken to mean that there is no significant agreement between rankings by criteria within a major objective and that there is also no significant agreement between rankings between objectives. This may be verified by rank correlation analysis for each criteria pair within each grouping.

There are also certain expected relationships between criteria belonging to separate groupings. For example, we may expect an inverse relationship between labor productivity and labor intensity. Moreover, other unexpected relationships between criteria can be made apparent by pair-wise correlation analysis. If such unexpected relationships are present, some inferences could be made to provide indications of the

dynamics of the industrial structure. These are the considerations taken in analyzing the significant results of correlation between rankings of criteria pairs below.

5.2.1. Manufacturing Industries

As may be seen in the rank correlation matrix for manufacturing industries criteria in Table 6, wage intensity is sufficiently positively correlated with capital-labor ratio ranked lowest to highest. Wage intensity can therefore be a proxy indicator for labor intensity.

Among the productivity and efficiency criteria, significant correlation is found between labor productivity and capital efficiency and between labor productivity and energy efficiency. The inverse relationship in the latter combination would seem to suggest that labor efficient industries are not necessarily energy efficient. On the other hand, as there is an inverse relationship between labor intensity and labor efficiency, it may be surmised that labor intensive industries are energy efficient. Also significant is the positive correlation between energy efficiency and domestic resource cost (DRC) which should not be surprising since the latter is a broader measure of industry efficiency. However, correlation between each of the measures of partial factor productivity with DRC are not significant. This should not be construed as inconsistent with the findings of Bautista and Tecson for the same year. One probable reason is the lack of sufficiently disaggregated data for measures of factor productivity as opposed to the more disaggregated industry DRC estimates. Also, the estimates of factor productivity used in this study are for establishments employing 5-19 workers while DRC estimates are for representative specific firms in each industry. Further, the valuation of output and capital for factor productivity estimates are not adjusted for shadow prices and other procedures that Bautista and Tecson used for their factor productivity estimates.

For measures of market orientation, the significant inverse correlation between export orientation and domestic demand is expected. The inverse correlation between domestic demand and import dependence ranked highest to lowest may be explained by noting that a relatively high demand in excess of domestic production requires importation of finished goods. This demand for imports influences production of import substitutes which may be import dependent. The inverse correlation between forward linkages and import dependence ranked lowest to highest implies that the import content of many inputs to production in the economy is high, i.e., industries with relatively high forward linkages are import dependent and vice-versa. The tests are not significant for the relationships between export orientation and import dependence, between export orientation and forward linkages, and between domestic demand and forward linkages.

There are interesting observations that may be made with respect to correlation of each criterion to criteria in other groups.

Wage intensity exhibited a significant positive correlation with energy efficiency, domestic resource cost, import dependence, and domestic demand; and a negative correlation with forward linkages and backward linkages. If wage intensity can be a measure of labor intensity, it can be said that labor intensive industries are energy efficient and are less likely to be import dependent. These observations may be explained by noting that most of the country's energy requirements was being imported in 1974 and that energy is more likely to be used by capital-intensive industries. Also, it may be inferred that industries with strong demand pay more wages in proportion to other inputs. The negative correlation of wage intensity with forward linkages may be explained by taking the positive correlation between the former and domestic demand as an indication that wage intensive industries are more final demand oriented. It is to be expected that industries which pay more for wages in proportion to other inputs will have lower derived demand, as shown by the negative correlation between wage intensity and backward linkages. The positive correlation between DRC and wage intensity maybe a generalization of what was observed earlier for the correlation between wage intensity and energy efficiency. While this relationship is desirable, it has to be qualified for the earlier observed limitations that arise from the use of DRC estimates. However, the result is acceptable if only because the rankings are biased towards labor-intensive and efficient industries.

Capital-labor ratio (K/L) ranked lowest to highest is superior to wage intensity as a measure of labor intensity. Using the measure, labor intensity is inversely correlated with labor productivity and directly correlated with capital efficiency. In the former case, it may be said that labor intensive industries are relatively more labor inefficient since they use more labor. On the other hand, as capital intensive industries require more capital, they are more likely to suffer from inefficiency in using capital. The positive correlation between K/L and energy efficiency is consistent with the findings on the correlation between wage intensity and the latter. The same is true for the significant relationship between DRC and K/L which is contrary to the findings of Bautista and Tecson despite using the same estimates. The probable explanation for the different result is the number of observations available to this study. A rank correlation computation for the study for all criteria using as observations the number of industries for which all values are available (68 industries) revealed an even higher positive correlation between K/L and DRC. It is possible then that the relationship could weaken if more observations were available. Since Bautista and Tecson had more observations, their conclusions regarding the weak relationship between K/L and DRC would be stronger.

There is also a significant positive correlation between export orientation and K/L and between the latter and backward linkages. On the other hand, an inverse correlation is observed between K/L and domestic demand and between the former and forward linkages. The positive correlation between export orientation and K/L confirms that the country's exports have a high labor content. There are two possible explanations for the opposite findings for the correlation of K/L with domestic demand and with backward linkages compared to the correlation of wage intensity with each of the aforementioned criteria. These are the differences in the number of observations and the measure of labor intensity. It would seem that, given the positive correlation between wage intensity and K/L, the inverse relationship between the latter and domestic demand indicates that domestic demand is high for the products of industries which are labor intensive relative to inputs other than capital. It would also seem that industries which are labor intensive relative to other inputs except capital will have low backward linkages.

Labor productivity is inversely related to export orientation, import dependence and backward linkages. The inverse correlation between labor productivity and export orientation implies the need to improve labor productivity in exporting industries. The inverse relationship between import dependence ranked lowest to highest and labor productivity can imply that import dependent industries are efficient users of labor. On the other hand, industries which buy their inputs from many sectors are not labor efficient. It is possible that the labor inefficiency of these industries are carried over from the supplying industries. However, since these industries are also labor intensive at least with respect to capital, then there is more reason for labor inefficiency. Since industries with relatively low forward linkages are relatively more labor intensive, then it may be expected that they would be less efficient users of labor. The same may be said for industries with relatively higher domestic demand.

The relationship between capital efficiency and export orientation appears to be weak. The same is true for the relationship between the former and domestic demand. On this basis, it would seem that capital efficiency is not an important consideration in the destination of an industry's products, (i.e., export versus domestic markets). However, industries with low forward linkages are capital efficient as they are also labor-intensive. In this respect, it is unfortunate that this efficiency is not transmitted to a greater number of sectors in the economy. As industries with relatively high backward linkages are labor-intensive, they are found to be more efficient users of capital. Surprisingly, import dependent industries are capital efficient.

Energy efficient industries are expectedly not likely to be import dependent. On the other hand, less energy efficient industries face higher domestic demand and would probably exhibit greater intersectoral linkages. The positive correlation between domestic resource cost (DRC) and export orientation is consistent with the findings of Bautista and

Tecson. The export oriented industries are relatively more efficient and competitive. The reverse is found to be true for industries whose output is bought by more industries in the economy, i.e. those with high forward linkages.

Finally, it is found that both export orientation and import dependence increase with backward linkages. On the other hand, those industries facing high domestic demand are low in backward linkages. Industries which sell most of their output as inputs to other industries also buy from many domestic industries for their productive inputs.

5.2.2. Other Secondary and Tertiary Sector Industries

Table 7 presents the rank correlation matrix for nine criteria considered for 27 other secondary and tertiary sector industries. The results are bound to suffer from the level of disaggregation possible from immediately available data. However, it may be useful to analyze the significant results if only to argue for greater disaggregation. Although the relationship between wage intensity and capital-labor ratio is in the expected direction, this is rather weak to be significant. Among the measures of efficiency, the only significant relationship is between capital efficiency and energy efficiency which is positive. There seems to be some explanation for this observation given that capital-intensive industries use energy less efficiently. This is corroborated by the positive correlation between labor intensity and capital efficiency and between labor intensity and energy efficiency. It follows that there would be a negative correlation between labor intensity and labor productivity.

Among the market orientation criteria, the inverse correlation between export orientation and domestic demand is expected. The positive relationship between export orientation and forward linkages indicates that industries which sell inputs to a greater number of industries can also be export oriented.

The observed relationship between wage intensity and backward linkages is consistent with that observed for the manufacturing industries as with the correlations between backward linkages and energy efficiency, between forward linkages and energy efficiency, and between export orientation and labor productivity.

There are six results which are opposite to those found for the manufacturing industries. Wage-intensive industries are not efficient users of labor which can be expected. Export oriented industries are relatively energy inefficient. This could probably be due to the greater energy inputs required for transporting and storing commodities and in hotels and restaurants catering to tourists (e.g. airconditioning, cooking). The opposite may be observed for industries facing high domestic demand. Industries which have high forward linkages are relatively labor intensive which may be an appropriate observation for

service-oriented firms. It is thus probably understandable that labor is used less efficiently in industries which sell to many other industries. Although the results are not significant regarding a possible inverse relationship between labor intensity and backward linkages, this observation would support the inverse relationship between capital efficiency and backward linkages.

6. Conclusions and Areas for Further Investigation

6.1. Some Tentative Conclusions

From the foregoing discussion, it is seen that when data problems do not pose major constraints, the relationships between the various criteria which are significant are mainly of the expected nature and if contrary to expectations, are sufficiently understandable. In the case of positive correlation, it may be said that the criteria support each other. In the case of negative or lack of correlation, the convenient conclusion is that there is more reason for adopting the criteria to produce industry rankings reflective of various considerations.

Although significant inverse correlation exists between some of the rankings, not one of the computed rank correlation coefficients exceed a value of $-.75$ and only a few exceed a value of $-.50$. For a pair of rankings to cancel each other out completely, the inverse correlation between rankings should be near perfect, i.e. the rank correlation coefficient should be close enough to a value of -1.0 .

The flexibility of the present methodology allows for changing emphasis of ranking objectives related to the four major considerations earlier mentioned. This can be accomplished by changing the weights for each of the criteria groups. Where data are available for all criteria within one group, the weight for each criterion can also be changed from the present equal weights within groups. For instance, if import dependence is eliminated from the market orientation criteria, different weights for the remaining criteria may be assigned. If the objective of industry prioritization is to further emphasize export orientation, then it can be done. The main advantage of this methodology is that it enables one to take into account various considerations which may not be consistent with one another. However, in the case of inverse correlation and unequal weights, further analysis is required regarding the extent to which unequal weights can be assigned without substantially invalidating the rankings of criteria assigned smaller weights.

Depending on specific objectives, the results of the study may be used accordingly. For example, if the policy concern or program objective is to promote efficiency, then only the productivity and efficiency rankings will be used. If export orientation is the primary concern, then the appropriate ranking should be consulted. The criteria interrelationships may also be further examined to see if, with more

disaggregated and complete data, fewer indicators will be sufficient to achieve similar results. Industry rankings according to individual criteria are contained in Annex Tables 3 to 6.

The problem of unevenness in the level of disaggregation and incompatibility of some estimates suggests a need to assess the feasibility of new efforts in collecting and processing information in relation to the urgency of determining industry priorities. The inability of the Philippine industrial sector to respond in the desired manner to policy changes is a long standing dilemma. The extent of efforts that could be put into periodic studies in national industry prioritization such as the present one could perhaps be indicated by questions such as these:

- Are the reforms appropriate in relation to the dynamics of industry interrelationships and to an overall development point of view? Are the reforms being properly implemented? Are there inconsistencies in industrial policy which are not readily apparent? Does it turn out that industries are appropriately prioritized according to the overall policy framework?

- What is the time frame within which the existing policy framework is valid? What will be the changes that might be expected in the future and how could these changes affect the policy framework?

Apart from the manufacturing sector, the secondary and tertiary sector industries have perhaps not been adequately studied and are not that well understood. There seems to be some benefit in more intensive analyses of these industries along the lines of the present exercise.

Given these considerations, how could one now proceed to determine what is necessary for an industry prioritization exercise? Some decision variables have to be identified for purposes of streamlining data collection sufficient to meet essential information needs. Policy makers must perhaps have a fuller appreciation of the benefits of the intelligent utilization of data processing systems to policy formulation. They must also perhaps need to more fully recognize that such benefits will be forthcoming only through efforts to improve data quality and timeliness. In this regard, the SAL II-supported upgrading of NCSO capabilities to gather and process industry data to be able to monitor changes in the industrial structure is noteworthy.

6.2. Some Areas for Immediate Investigation

6.2.1. Forthcoming Information

To enable more disaggregation of industries for some of the criteria the NCSO has been requested and has agreed to process the following information:

- Computation of I-O generated criteria from the 1974 240-sector I-O and the 1978 update of the 1974 60-sector I-O. The former will provide a disaggregation of the present set of industries according to criteria previously available only at the 120-sector and the 60-sector levels and will be particularly useful for refining the priority rankings for the other secondary and tertiary sector industries. The latter will provide indications as to how rankings might have changed between 1974 and 1978. These information have been made available very recently (June, 1983).

- Reconciliation of the I-O and ASE codes for 1974 and computation of ASE-generated criteria specific to small and medium scale industries. These will be made available by the NCSO before the end of the present year. Also being explored is the possibility of requesting NCSO for regional ASE-generated indicators.

The National Accounts Staff of the NEDA has indicated that a 120-sector I-O for 1980 will be available by the end of this year. Once this is available, and together with what may be utilized from the 1979 and 1980 ASEs, it would be possible to generate a more updated set of industry rankings.

6.2.2. Refinements in Methodology and Criteria Estimates

A principal recommendation for this study is to examine more closely the relationships between criteria and goals in order to identify which criteria are more important than others in prioritizing industries. A possible approach would be to use some multivariate statistical technique. An alternative procedure would be some sequential selection method. This would entail a ranking of the criteria and a determination of cut-off values for each criterion since the procedure involves a criterion-by-criterion screening process. It is also desirable to derive the direct and indirect employment effects for each industry as these would definitely be superior to wage intensity and capital-labor ratio in addressing the employment generation objective. It may also be advisable to obtain or compute estimates of factor productivity for 1974 using shadow prices and to compute DRC for sectors for which this has not been estimated. Completion of an update of a study on shadow prices in the Philippines late this year would enable the estimation of more updated factor productivity data and DRC.

This study should be periodically updated upon availability of a new Philippine I-O, which is approximately every five years.

6.3. Some Considerations for Qualitative Industry Selection Criteria

An exercise in quantification admittedly has its limits. As in any progressive procedure, the marginal utility from a quantitative analysis will be outweighed by its marginal costs at some point. At the same

time, not all industry selection criteria lend to quantification. Hence, the realistic application of the results of the study should include difficult-to-quantify as well as qualitative considerations, such as:

- Intra-industry competition. In choosing participants, assistance programs should perhaps be so designed as to preclude displacement of similar businesses while encouraging greater intra-industry competition. Monopoly gives rise to inefficiency in spite or probably even as a result of government regulation and intervention.
- Ownership and entrepreneurial orientation. Should an industry assistance program favor small businesses and not the small business per se? Should the program favor a potential entrepreneur or one with a proven track record? Is access to commercial credit a key consideration or should assistance be given to enterprises which have yet to develop their credit standing?
- Technology. Should support be given to industries where technology needs to be improved or developed or to relatively efficient industries where technology is already developed? A technologically superior industry is likely to be more among the leading industries.
- Industry prospects. Should a virtually non-existent or inefficient industry which faces good prospects be favored, or should assistance be limited to leading industries which face good prospects? What types of operations are more likely to succeed than others given market trends and industry trends on solvency and profitability?
- Focus of other programs. What are neglected industries which could merit industry assistance?
- Political considerations. How should one strike a balance between objective selection and political pressure?

It need not perhaps be mentioned that these criteria will have to be matched with the resources, needs and potentials of the specific sites for the selected participants in an industry program.

TABLE 1. MANUFACTURING INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTORY PROC & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATION (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC	75.3	95.2	56.6	86.3	38.5	.8959
43-1	READY-MADE CLOTHING	72.9	93.9	49.2	86.3	41.2	.8959
43	OTHER WEARING APPAREL	68.9	94.2	35.6	86.3	41.2	.8959
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	68.2	83.0	62.0	67.5	44.4	.6645
44-2	OTHER MADE-UP TEXTILE GOODS	67.7	71.2	54.5	86.3	40.9	.8959
44-1	MANUFACTURES OF EMBROIDERED PRODUCTS	67.7	67.8	52.0	86.3	40.7	.8959
76-1	METAL CANS, BOXES AND CONTAINERS	67.5	50.7	64.6	95.8	41.4	.4763
74	STRUCTURAL METAL PRODUCTS	66.7	55.7	54.5	95.8	42.9	.4763
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	65.9	53.5	55.6	95.8	44.2	.4763
41-1	CORRAGE, TWINE AND NET INDUSTRIES	65.6	60.0	51.3	90.4	51.1	.5959
53-1	TANNING AND LEATHER FINISHING	64.8	60.7	52.8	67.5	40.4	.6645
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	64.4	81.3	71.5	45.8	48.0	.8528
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	63.8	79.6	61.8	36.7	44.2	.8244
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	63.7	47.1	57.9	90.4	51.1	.5959
78	SPECIAL INDUSTRY MACHINERY	63.3	78.3	74.7	36.7	63.7	.8244
72	BASIC NON-FERROUS METAL INDUSTRIES	63.1	28.3	59.3	99.2	70.3	.4431
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	62.7	66.7	79.8	45.8	50.1	.8528
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	62.6	42.1	57.1	95.8	41.4	.4763
92-5	MEDICAL, ORTHOPEDIC AND SURGICAL SUPPLIES	62.4	66.7	79.6	45.8	48.0	.8528
47	FURNITURE AND FIXTURES	62.4	95.1	58.7	40.4	41.0	.7113
41-3	OTHER TEXTILE PRODUCTS	62.3	43.4	56.8	90.4	51.1	.5959
76-3	FABRICATED WIRE PRODUCTS	62.2	39.2	58.5	95.8	41.4	.4763
65-2	INSECTICIDES, GERMICIDES AND AGRICULTURAL CHEMICALS	61.5	49.4	66.7	71.3	52.3	.4841
31-1	FISH CANNING	61.3	66.9	56.8	58.3	67.4	.4365
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	60.9	66.7	74.3	45.8	49.1	.8528
92-2	MUSICAL INSTRUMENTS	60.9	66.7	74.3	45.8	49.1	.8528
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	60.9	86.7	67.3	30.8	54.9	.5649
65-3	OTHER CHEMICAL PRODUCTS	60.9	57.5	56.5	71.3	53.1	.4841
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	60.9	53.1	61.0	71.3	52.7	.4841
54	RUBBER FOOTWEAR	60.7	58.6	52.7	82.9	24.8	.4102
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	60.7	66.7	74.3	45.8	46.8	.8528
92-9	TOYS, DOLLS, PARLOR GAMES, EXCL. PLASTIC/RUBBER	60.5	66.7	72.9	45.8	49.1	.8528
92-7	SPORTS EQUIPMENT AND SUPPLIES	60.3	66.7	72.9	45.8	46.8	.8528
92-8	PEN, PENCIL, OFFICE AND ARTISTS' SUPPLIES	60.3	66.7	72.9	45.8	46.8	.8528
79	GENERAL INDUSTRY MACHINERY AND EQUIPT., EXCL. ELEC.	59.3	78.3	65.2	36.7	52.9	.8244
31-2	OTHER FISH AND SEAFOOD PRODUCTS	59.0	66.9	48.8	58.3	67.4	.4365
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	58.8	86.7	60.0	30.8	55.9	.5649
92-3	FABRICATED PLASTIC PRODUCTS	58.8	77.3	56.4	45.8	49.1	.8528
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	57.9	99.2	70.0	11.7	36.3	.3380
52-1	COMMERCIAL AND JOB PRINTING	57.7	99.2	69.6	11.7	36.3	.3380

TABLE 1 (CONT.) MANUFACTURING INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTOR PROC & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATION (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
40-2	KNITTING MILL PRODUCTS	57.5	41.6	43.0	50.4	50.0	.5959
45	LUMBER	57.5	52.2	53.2	66.3	59.6	.5777
35	DESSICATED COCONUT PRODUCTS	57.4	56.5	57.4	58.3	57.6	.4365
65-1	COSMETICS AND TOILET PREPARATIONS	56.2	56.3	42.5	71.3	52.3	.4841
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	55.9	27.8	42.7	55.8	60.4	.4763
27-1	EVAPORATED AND CONDENSED MILK	54.0	28.3	52.4	60.0	61.8	.4365
55	TIRES AND INNERTUBES MFG. AND RETREADING	54.3	36.0	53.2	62.9	27.3	.4102
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	54.2	44.8	49.2	71.3	46.1	.4841
77	AGRICULTURAL MACHINERY AND EQUIPMENT	54.1	48.0	61.7	36.7	41.7	.6244
56	OTHER RUBBER AND RELATED PRODUCTS	53.7	32.3	47.2	62.9	50.2	.4102
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	53.4	88.3	63.5	11.7	43.4	.3380
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	52.9	77.3	45.0	40.4	41.1	.7113
26-2	MEAT PRODUCTS, CANNED	52.5	36.4	49.9	76.3	37.1	.4365
62	PLASTIC MATERIALS	52.1	25.3	55.0	71.3	65.8	.4841
26-3	MEAT PRODUCTS, UNCANNED	51.9	36.4	48.0	76.3	37.1	.4365
27-2	ICE CREAM	51.8	30.8	41.2	60.0	61.8	.4365
40-1	TEXTILE MILL PRODUCTS	51.5	32.9	31.5	90.4	50.0	.5959
51-1	BOOKS AND PAMPHLETS	51.1	86.7	55.4	11.7	43.4	.3360
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	51.0	21.4	42.0	62.9	41.4	.4763
36-3	MACARONI, SPAGHETTI AND NOODLES	50.6	58.1	32.1	58.3	60.2	.4365
83	BATTERIES	50.5	54.3	70.4	30.8	38.2	.5649
27	DAIRY PRODUCTS	50.4	30.8	36.7	60.0	61.8	.4365
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	50.4	76.7	41.4	27.1	68.0	.5649
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	50.3	77.1	50.5	27.1	38.5	.5649
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	50.2	83.3	37.2	23.8	69.4	.4034
60	FERTILIZER AND LIME	50.2	22.7	53.5	74.6	49.6	.4841
34-1	CANDY AND CHEWING GUM PRODUCTS	49.5	61.4	28.5	58.3	50.1	.4365
71	BASIC FERROUS METAL INDUSTRIES	49.1	7.2	41.3	99.2	47.8	.4431
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	49.1	27.0	52.4	71.3	39.2	.4841
46	PLYWOOD AND VENEER PLANTS	47.9	52.4	51.4	38.8	51.5	.5777
58	COCONUT OIL	46.5	51.4	81.0	.8	65.8	.4841
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	46.2	52.0	47.7	40.4	41.3	.7113
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	46.1	23.2	30.0	80.0	61.8	.4365
90	SHIPBUILDING AND REPAIRING	46.0	86.6	31.9	15.4	58.5	.8412
70-1	POTTERY, CHINA AND EARTHENWARE	46.0	66.1	40.3	23.8	69.4	.4034
26-1	SLAUGHTERING AND POULTRY DRESSING	44.8	9.6	51.2	76.3	37.1	.4365
50-1	PAPER PRODUCTS	44.5	81.1	31.2	20.0	48.3	.4317
33	BAKERY PRODUCTS	44.5	55.6	19.9	58.3	42.9	.4365
57-1	COMPRESSED AND LIQUEFIED GASES	44.3	37.5	54.7	34.2	64.2	.4841
91-1	MOTORCYCLES, BICYCLES AND PARTS	43.9	80.8	34.9	15.4	45.2	.6412

TABLE 1 (CONT.) MANUFACTURING INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTOR PROD & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATION (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
67	HYDRAULIC CEMENT	43.6	21.5	29.9	77.9	48.5	.4034
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONES	43.5	30.3	68.6	30.8	45.5	.5649
37-2	MINES	43.1	52.3	70.4	5.8	45.3	.5282
37-3	BREWERY AND MALT PRODUCTS	43.1	52.3	70.4	5.8	44.8	.5282
36-2	STARCH AND STARCH BY-PRODUCTS	43.0	37.5	27.6	58.3	60.2	.4365
36-5	PREPARED FEEDS FOR ANIMALS AND FOWLS	42.6	28.3	35.2	58.3	60.2	.4365
34-2	COCCA AND CHOCOLATE PRODUCTS	42.4	34.4	31.9	58.3	50.1	.4365
50-2	PAPER AND PAPERBOARD CONTAINERS	42.3	73.9	30.9	20.0	48.3	.4317
38	SOFTDRINKS AND CARBONATED WATER	42.1	72.9	49.5	5.8	36.5	.5282
68-2	STRUCTURAL CONCRETE PRODUCTS	42.1	69.6	26.5	23.8	61.7	.4034
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	41.5	36.5	80.2	8.8	38.1	.4035
84-1	ELECTRICAL LAMPS AND FIXTURES	39.3	31.9	50.5	30.8	53.1	.5649
36-1	PROCESSED COFFEE	39.1	21.9	29.7	58.3	61.2	.4365
68-1	STRUCTURAL CLAY PRODUCTS	38.8	54.0	30.9	23.8	61.7	.4034
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	38.7	52.3	55.6	5.8	44.8	.5282
50-3	MISC. CONVERTED PAPER PRODUCTS, N.E.C.	38.6	59.9	32.7	20.0	47.9	.4317
84-2	ELECTRICAL WIRES AND WIRING DEVICES	38.5	33.0	50.6	27.1	52.9	.5649
36	OTHER MANUFACTURED FOODS	37.9	19.2	28.3	58.3	61.2	.4365
36-4	VEGETABLE LARD AND MARGARINE	37.8	19.2	28.3	58.3	60.2	.4365
36-6	FLAVORING EXTRACTS	37.8	19.2	28.3	58.3	60.2	.4365
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	37.7	25.2	23.0	58.3	57.8	.4365
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	37.3	45.4	35.4	20.0	70.8	.4317
59	OTHER OILS AND FATS	37.0	31.4	61.4	.8	89.5	.4841
57-2	BASIC INDUSTRIAL CHEMICALS	37.0	23.6	44.0	34.2	64.2	.4841
66-2	PRODUCTS OF PETROLEUM, COKE AND COAL	36.2	21.9	67.3	17.5	42.2	.4034
39-1	CIGARETTES	36.1	36.5	62.5	8.8	38.1	.4035
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	35.4	64.3	35.6	2.9	45.6	.8412
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	34.9	63.9	34.4	2.9	45.6	.8412
32-1	CORN MILLING	34.9	4.2	40.6	58.3	40.1	.4365
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	34.9	14.2	24.6	58.3	57.5	.4365
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND WAFES	34.7	25.3	44.5	30.8	45.5	.5649
36-7	MISC. FOOD MANUFACTURES, N.E.C.	34.5	13.3	22.7	58.3	62.1	.4365
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	33.2	54.5	25.6	15.4	45.2	.8412
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	32.8	11.0	26.5	58.3	40.1	.4365
89	REPAIR OF MOTOR VEHICLES	31.5	62.3	22.4	2.9	52.7	.8412
29	SUGAR MILLING AND REFINING	30.4	19.9	49.3	13.8	55.4	.4365
69	GLASS AND GLASS PRODUCTS	28.8	33.7	20.2	23.8	54.7	.4034
39-3	LEAF TOBACCO PROCESSING	28.4	12.1	61.0	8.8	38.1	.4035
66-1	PETROLEUM REFINERIES	27.6	1.5	59.0	17.5	42.4	.4034
28	RICE MILLING	27.3	.4	34.6	50.4	16.5	.4365

TABLE 2. OTHER SECONDARY AND TERTIARY
SECTOR INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL	LABOR	FACTOR	BACKWARD	MARKET
		RANK	INTENSITY (WT=.30)	PROD & EFF (WT=.30)	LINKAGES (WT=.30)	ORIENTATION (WT=.10)
97	CONSTRUCTION	72.5	51.7	81.8	98.1	30.2
114	ADVERTISING SERVICES	65.9	78.1	70.0	51.9	58.6
119	PERSONAL SERVICES	63.3	93.9	65.6	35.2	48.8
108	SERVICES INCIDENTAL TO TRANSPORT	63.1	47.3	76.1	72.2	43.8
115	OTHER BUSINESS SERVICES, N.E.C.	62.7	81.1	53.1	51.9	69.1
113	PROFESSIONAL SERVICES	61.6	70.5	64.4	51.9	56.2
93	SCRAP	61.1	1.9	98.1	94.4	67.8
112	PRIVATE MEDICAL SERVICES	55.5	67.2	42.4	51.9	76.4
104	RAILROAD TRANSPORT	55.4	76.4	21.0	72.2	45.1
96	WATER	51.4	35.5	33.0	68.9	41.4
101	NON-BANKING FINANCIAL INSTITUTIONS	50.9	50.0	90.7	18.5	30.9
105	OTHER LAND TRANSPORT	50.3	59.7	22.2	72.2	40.1
111	PRIVATE EDUCATIONAL SERVICES	49.5	63.8	22.7	51.9	60.2
107	AIR TRANSPORT	46.7	21.4	40.6	72.2	64.8
102	LIFE AND NON-LIFE INSURANCE	46.3	51.5	80.1	5.6	51.2
116	RECREATIONAL SERVICES	45.6	37.4	43.7	51.9	56.8
100	BANKING	45.3	42.6	79.6	18.5	30.9
99	RETAIL TRADE	44.9	68.3	50.9	11.1	58.0
117	DRINKING AND EATING PLACES	44.9	59.1	34.7	35.2	61.7
109	STORAGE AND WAREHOUSING	43.8	49.2	60.4	1.9	43.8
98	WHOLESALE TRADE	43.2	66.4	46.0	11.1	61.7
106	WATER TRANSPORT	43.1	31.6	24.8	72.2	45.1
95	GAS	42.4	11.5	25.6	88.9	46.3
110	COMMUNICATION	41.3	50.8	46.6	27.8	37.7
103	REAL ESTATE	40.7	17.9	80.6	24.1	38.9
94	ELECTRICITY	39.1	5.9	26.9	83.3	42.6
118	HOTELS AND OTHER LODGING PLACES	34.9	31.4	27.3	35.2	67.9

TABLE 3. CONSUMER GOODS MANUFACTURING INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTOR PROC & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATIONAL (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC	75.3	95.2	56.6	86.3	38.5	.8959
43-1	READY-MADE CLOTHING	72.9	93.9	49.2	86.3	41.2	.8959
43	OTHER WEARING APPAREL	68.9	94.2	35.6	86.3	41.2	.8959
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	68.2	83.0	62.0	67.5	44.4	.6645
44-2	OTHER MADE-UP TEXTILE GOODS	67.7	71.2	54.5	86.3	40.9	.8959
44-1	MANUFACTURES OF EMBROIDERED PRODUCTS	67.7	67.8	58.0	86.3	40.7	.8959
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	64.4	81.3	71.5	45.8	48.0	.8528
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	63.7	47.1	57.5	90.4	51.1	.5959
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	62.7	66.7	79.8	45.8	50.1	.8528
92-5	MEDICAL, CRTHOPEDIC AND SURGICAL SUPPLIES	62.4	66.7	79.6	45.8	48.0	.8528
47	FURNITURE AND FIXTURES	62.4	95.1	58.7	40.4	41.0	.7113
41-3	OTHER TEXTILE PRODUCTS	62.3	43.4	56.8	90.4	51.1	.5959
31-1	FISH CANNING	61.3	66.9	56.8	58.3	67.4	.4365
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	60.9	66.7	74.3	45.8	49.1	.8528
92-2	MUSICAL INSTRUMENTS	60.9	66.7	74.3	45.8	49.1	.8528
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	60.9	53.1	61.0	71.3	52.7	.4841
54	RUBBER FOOTWEAR	60.7	58.6	52.7	82.9	24.8	.4102
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	60.7	66.7	74.3	45.8	46.8	.8528
92-9	TOYS, GAMES, PARLOR GAMES, EXCL. PLASTIC/RUBBER	60.5	66.7	72.9	45.8	49.1	.8528
92-7	SPORTS EQUIPMENT AND SUPPLIES	60.3	66.7	72.9	45.8	46.8	.8528
92-8	PEN, PENCIL, OFFICE AND ARTISTS' SUPPLIES	60.3	66.7	72.9	45.8	46.8	.8528
31-2	OTHER FISH AND SEAFOOD PRODUCTS	59.0	66.9	48.8	58.3	67.4	.4365
40-2	KNITTING MILL PRODUCTS	57.5	41.6	43.0	90.4	50.0	.5959
35	DESSICATED COCONUT PRODUCTS	57.4	56.5	57.4	58.3	57.6	.4365
65-1	COSMETICS AND TOILET PREPARATIONS	56.2	56.3	42.5	71.3	52.3	.4841
27-1	EVAPORATED AND CONDENSED MILK	54.4	28.3	52.4	80.0	61.8	.4365
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	53.4	88.3	63.5	11.7	43.4	.3380
26-2	MEAT PRODUCTS, CANNED	52.5	36.4	49.9	76.3	37.1	.4365
26-3	MEAT PRODUCTS, UNCANNED	51.9	36.4	48.0	76.3	37.1	.4365
27-2	ICE CREAM	51.8	30.8	41.2	80.0	61.8	.4365
40-1	TEXTILE MILL PRODUCTS	51.5	32.9	31.5	90.4	50.0	.5959
51-1	BOOKS AND PAMPHLETS	51.1	88.7	55.4	11.7	43.4	.3380
36-3	MACARONI, SPAGHETTI AND NOODLES	50.6	58.1	32.1	58.3	60.2	.4365
27	DAIRY PRODUCTS	50.4	30.8	36.7	80.0	61.8	.4365
34-1	CANDY AND CHEWING GUM PRODUCTS	49.5	61.4	28.5	58.3	50.1	.4365
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	49.1	27.0	52.4	71.3	39.2	.4841
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	46.1	23.2	30.0	80.0	61.8	.4365
70-1	POTTERY, CHINA AND EARTHENWARE	46.0	66.1	40.3	23.8	69.4	.4034
26-1	SLAUGHTERING AND POULTRY DRESSING	44.8	9.6	51.2	76.3	37.1	.4365
33	BAKERY PRODUCTS	44.5	55.6	19.9	58.3	42.9	.4365

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TABLE 3 (CONT.) CONSUMER GOODS MANUFACTURING INDUSTRIES

 PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
 BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTORY PROC & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATION (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONOS	43.5	30.3	68.8	30.8	45.5	.5649
37-2	MINES	43.1	52.3	70.4	5.8	45.3	.5282
37-3	BREWERY AND MALT PRODUCTS	43.1	52.3	70.4	5.6	44.8	.5282
36-2	STARCH AND STARCH BY-PRODUCTS	43.0	37.5	27.6	58.3	60.2	.4365
36-5	PREPARED FEEDS FOR ANIMALS AND FOWLS	42.6	28.3	35.2	58.3	60.2	.4365
34-2	CUCCA AND CHOCOLATE PRODUCTS	42.4	34.4	31.9	58.3	50.1	.4365
38	SOFTDRINKS AND CARBONATED WATER	42.1	72.9	49.5	5.8	36.5	.5282
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	41.5	36.5	80.2	8.8	38.1	.4035
36-1	PROCESSED COFFEE	39.1	21.9	29.7	58.3	61.2	.4365
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	38.7	52.3	55.8	5.8	44.8	.5282
36	OTHER MANUFACTURED FOODS	37.9	19.2	28.3	58.3	61.2	.4365
36-4	VEGETABLE LARD AND MARGARINE	37.8	19.2	28.3	58.3	60.2	.4365
36-6	FLAVORING EXTRACTS	37.8	19.2	28.3	58.3	60.2	.4365
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	37.7	25.2	23.0	58.3	57.8	.4365
39-1	CIGARETTES	36.1	36.5	62.5	8.8	38.1	.4035
32-1	CORN MILLING	34.9	4.2	40.6	58.3	40.1	.4365
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	34.9	14.2	24.6	58.3	57.5	.4365
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND WARES	34.7	25.3	44.5	30.8	45.5	.5649
36-7	MISC. FOOD MANUFACTURES, N.E.C.	34.5	13.3	22.7	58.3	62.1	.4365
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	32.8	11.0	26.5	58.3	40.1	.4365
29	SUGAR MILLING AND REFINING	30.4	19.9	49.3	13.8	55.4	.4365
39-3	LEAF TOBACCO PROCESSING	28.4	12.1	61.0	8.8	38.1	.4035
28	RICE MILLING	27.3	.4	34.6	50.4	16.5	.4365

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TABLE 4. INTERMEDIATE GOODS MANUFACTURING INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-O CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTORY PROD & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATION (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
76-1	METAL CANS, BOXES AND CONTAINERS	67.5	50.7	64.6	95.8	41.4	.4763
74	STRUCTURAL METAL PRODUCTS	66.7	55.7	54.5	95.8	42.9	.4763
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	65.9	53.5	55.6	95.6	44.2	.4763
41-1	CORDAGE, TWINE AND NET INDUSTRIES	65.6	60.0	51.3	90.4	51.1	.5955
53-1	TANNING AND LEATHER FINISHING	64.8	80.7	52.2	67.5	44.4	.6645
72	BASIC NON-FERROUS METAL INDUSTRIES	63.1	28.3	59.3	99.2	70.3	.4431
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	62.6	42.1	57.1	95.8	41.4	.4763
76-3	FABRICATED WIRE PRODUCTS	62.2	39.2	58.5	95.8	41.4	.4763
65-2	INSECTICIDES, GERMICIDES AND AGRICULTURAL CHEMICALS	61.5	49.4	66.7	71.3	52.3	.4841
65-3	OTHER CHEMICAL PRODUCTS	60.9	57.5	56.5	71.3	53.1	.4841
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	57.9	99.2	70.0	11.7	36.3	.3380
52-1	COMMERCIAL AND JOB PRINTING	57.7	99.2	69.6	11.7	36.3	.3380
45	LUMBER	57.5	52.2	53.2	66.3	59.6	.5777
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	55.9	27.2	42.7	95.8	60.4	.4763
55	TIRES AND INNERTUBES MFG. AND RETREADING	54.3	36.0	53.2	42.9	27.3	.4102
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	54.2	44.8	49.2	71.3	46.1	.4841
56	OTHER RUBBER AND RELATED PRODUCTS	53.7	32.3	47.2	82.9	50.2	.4102
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	52.9	77.3	45.0	40.4	41.1	.7113
52	PLASTIC MATERIALS	52.1	25.3	55.0	71.3	65.8	.4841
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	51.0	21.4	42.0	92.9	41.4	.4763
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	50.2	83.3	37.2	23.8	69.4	.4034
60	FERTILIZER AND LIME	50.2	22.7	53.5	74.6	49.6	.4841
71	BASIC FERROUS METAL INDUSTRIES	49.1	7.2	41.3	99.2	47.8	.4431
46	PLYWOOD AND VENEER PLANTS	47.9	52.4	51.4	38.2	51.5	.5777
58	COCONUT OIL	46.5	51.4	81.0	.8	65.8	.4841
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	46.2	52.0	47.7	40.4	41.3	.7113
50-1	PAPER PRODUCTS	44.5	81.1	31.2	20.0	48.3	.4317
57-1	COMPRESSED AND LIQUEFIED GASES	44.3	37.5	54.7	34.2	64.2	.4841
67	HYDRAULIC LEMENT	43.6	21.5	29.9	77.9	42.5	.4034
50-2	PAPER AND PAPERBOARD CONTAINERS	42.3	73.9	30.9	20.0	42.3	.4317
68-2	STRUCTURAL CONCRETE PRODUCTS	42.1	69.6	26.5	23.8	61.7	.4034
68-1	STRUCTURAL CLAY PRODUCTS	38.8	54.0	30.9	23.8	61.7	.4034
50-3	MISC. CONVERTED PAPER PRODUCTS, N.E.C.	36.6	59.9	32.7	20.0	47.9	.4317
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	37.3	45.4	35.4	20.0	70.8	.4317
59	OTHER OILS AND FATS	37.0	31.4	61.4	.8	89.5	.4841
57-2	BASIC INDUSTRIAL CHEMICALS	37.0	23.6	44.0	34.2	64.2	.4841
66-2	PRODUCTS OF PETROLEUM, COKE AND COAL	36.2	21.9	67.3	17.5	42.2	.4034
69	GLASS AND GLASS PRODUCTS	28.8	33.7	20.2	23.8	54.7	.4034
66-1	PETROLEUM REFINERIES	27.6	1.5	59.0	17.5	42.4	.4034

TABLE 5. CAPITAL GOODS MANUFACTURING INDUSTRIES

PERCENTILE RANKING OF PHILIPPINE INDUSTRIES
BY QUANTITATIVE SELECTION CRITERIA

I-0 CODE	SECTOR/INDUSTRY	OVERALL RANK	LABOR INTENSITY (WT=.30)	FACTORY PROD & EFF (WT=.30)	BACKWARD LINKAGES (WT=.30)	MARKET ORIENTATION (WT=.10)	RATIO OF HOUSEHOLD TO TOTAL EMPLOYMENT
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	63.8	79.6	81.8	36.7	44.2	.8244
78	SPECIAL INDUSTRY MACHINERY	63.3	78.3	74.7	36.7	63.7	.8244
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	60.9	86.7	67.3	30.8	54.9	.5649
79	GENERAL INDUSTRY MACHINERY AND EQUIPT., EXCL. ELEC.	59.3	78.3	65.2	36.7	52.9	.8244
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	58.8	86.7	60.0	30.8	55.9	.5649
77	AGRICULTURAL MACHINERY AND EQUIPMENT	54.1	48.0	81.7	36.7	41.7	.8244
83	BATTERIES	50.5	54.3	70.4	30.8	38.2	.5649
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	50.4	76.7	41.4	27.1	68.0	.5649
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	50.3	77.1	50.5	27.1	38.5	.5649
90	SHIPBUILDING AND REPAIRING	46.0	86.6	31.9	15.4	58.5	.8412
91-1	MOTORCYCLES, BICYCLES AND PARTS	43.9	80.8	34.9	15.4	45.2	.8412
84-1	ELECTRICAL LAMPS AND FIXTURES	39.3	31.9	50.5	30.2	53.1	.5649
84-2	ELECTRICAL WIRES AND WIRING DEVICES	38.5	33.0	50.6	27.1	52.9	.5649
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	35.4	64.3	35.6	2.9	45.6	.8412
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	34.9	63.9	34.4	2.9	45.6	.8412
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	33.2	54.5	25.6	15.4	45.2	.8412
89	REPAIR OF MOTOR VEHICLES	31.5	62.3	22.4	2.9	52.7	.8412

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TABLE 6. RANK CORRELATION MATRIX, MANUFACTURING INDUSTRIES
 (FIGURES IN LOWER LEFT ARE T-VALUES, N=NUMBER OF INDUSTRIES, FIGURES IN PARENTHESES ARE SIGNIFICANCE LEVELS)

CRITERIA	RAGE INTENSITY	K/L RATIO	LABOR PRO- DUCTIVITY	CAPITAL EFFICIENCY	ENERGY EF- FICIENCY	ORC	EXPORT ORIEN	IMPORT DEPENDENCE	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES
RAGE INTENSITY	-	.168	.022	-.012	.172	.198	.081	.180	.221	-.519	-.450
K/L RATIO	1.568 N= 87 (.10)	-	-.375	.287	.215	.238	.272	.081	-.291	-.280	.158
LABOR PRODUCTIVITY	.236 N=120 (NS)	-3.727 N= 87 (.0005)	-	.121	-.327	-.063	-.266	-.561	.366	.319	-.182
CAPITAL EFFICIENCY	-.134 N=120 (NS)	2.759 N= 87 (.005)	1.326 N=120 (.10)	-	.104	.087	.045	-.247	-.026	-.342	.133
ENERGY EFFICIENCY	1.893 N=120 (.05)	2.026 N= 87 (.025)	-3.757 N=120 (.0005)	1.136 N=120 (NS)	-	.156	.032	.166	-.227	-.421	-.238
ORC	1.958 N= 96 (.025)	2.166 N= 80 (.025)	-.609 N= 96 (NS)	.848 N= 96 (NS)	1.531 N= 96 (.10)	-	.246	.086	.043	-.207	-.033
EXPORT ORIENTATION	.884 N=120 (NS)	2.605 N= 87 (.01)	-2.999 N=120 (.01)	.489 N=120 (NS)	.346 N=120 (NS)	2.464 N= 96 (.01)	-	.090	-.249	-.086	.114
IMPORT DEPENDENCE	1.833 N=102 (.05)	.695 N= 75 (NS)	-6.770 N=102 (.0005)	-2.549 N=102 (.01)	1.684 N=102 (.05)	.759 N= 79 (NS)	.904 N=102 (NS)	-	-.351	-.519	-.497
DOMESTIC DEMAND	2.461 N=120 (.01)	-2.808 N= 87 (.005)	4.279 N=120 (.0005)	-.283 N=120 (NS)	-2.533 N=120 (.01)	.413 N= 96 (NS)	-2.795 N=120 (.005)	-3.751 N=102 (.0005)	-	.047	-.140
FORWARD LINKAGES	-6.601 N=120 (.0005)	-2.690 N= 87 (.005)	3.662 N=120 (.0005)	-3.957 N=120 (.0005)	-5.043 N=120 (.0005)	-2.056 N= 96 (.025)	-.940 N=120 (NS)	-6.068 N=102 (.0005)	.511 N=120 (NS)	-	.316
BACKWARD LINKAGES	-5.473 N=120 (.0005)	1.473 N= 87 (.10)	-2.015 N=120 (.025)	1.455 N=120 (.10)	-2.662 N=120 (.005)	-.320 N= 96 (NS)	1.240 N=120 (NS)	-5.732 N=102 (.0005)	-1.540 N=120 (.10)	3.613 N=120 (.0005)	-

NS - NOT SIGNIFICANT

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TABLE 7. RANK CORRELATION MATRIX, OTHER SECONDARY AND TERTIARY SECTOR INDUSTRIES
 (FIGURES IN LOWER LEFT ARE T-VALUES, N=NUMBER OF INDUSTRIES, FIGURES IN PARENTHESES ARE SIGNIFICANCE LEVELS)

CRITERIA	WAGE INTENSITY	K/L RATIO	LABOR PRODUCTIVITY	PRO-CAPITAL EFFICIENCY	ENERGY EFFICIENCY	EXPORT ORIENTATION	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES
WAGE INTENSITY	-	.234	-.301	.105	.125	-.046	.244	.223	-.298
K/L RATIO	1.130 N= 24 (NS)	-	-.433	.731	.410	.113	-.093	.402	-.229
LABOR PRODUCTIVITY	-1.482 N= 24 (.10)	-2.254 N= 24 (.01)	-	.128	.210	-.309	.223	-.687	.134
CAPITAL EFFICIENCY	.494 N= 24 (NS)	5.029 N= 24 (.0005)	.604 N= 24 (NS)	-	.697	-.087	.118	.008	-.340
ENERGY EFFICIENCY	.632 N= 27 (NS)	2.106 N= 24 (.025)	1.008 N= 24 (NS)	4.564 N= 24 (.0005)	-	-.477	.386	-.361	-.538
EXPORT ORIENTATION	-.232 N= 27 (NS)	.531 N= 24 (NS)	-1.525 N= 24 (.10)	-.411 N= 24 (NS)	-2.713 N= 27 (.01)	-	-.649	.309	.053
DOMESTIC DEMAND	1.256 N= 27 (NS)	-.436 N= 24 (NS)	1.074 N= 24 (NS)	.557 N= 24 (NS)	2.090 N= 27 (.025)	-4.267 N= 27 (.0005)	-	-.165	-.228
FORWARD LINKAGES	1.141 N= 27 (NS)	2.062 N= 24 (.025)	-4.429 N= 24 (.0005)	.039 N= 24 (NS)	-1.937 N= 27 (.05)	1.623 N= 27 (.10)	-.837 N= 27 (NS)	-	-.123
BACKWARD LINKAGES	-1.563 N= 27 (.10)	-1.104 N= 24 (NS)	.634 N= 24 (NS)	-1.694 N= 24 (.10)	-3.192 N= 27 (.005)	.267 N= 27 (NS)	-1.171 N= 27 (NS)	-.618 N= 27 (NS)	-

NS - NOT SIGNIFICANT

ANNEX TABLE 1. DATA USED FOR RANKING MANUFACTURING INDUSTRIES
(NOTE: STARS INDICATE NO DATA)

I-C CODE	SECTOR/ INDUSTRY	WAGE INTEN.	R/L RATIO I	LABOR PRCO. I	CAPITAL EFF. I	ENERGY EFF.
26-1	SLAUGHTERING AND POULTRY DRESSING	.06850	*****	4089.00000	.62900	.01160
26-2	MEAT PRODUCTS, CANNED	.06850	57.50000	4089.00000	.68900	.01160
26-3	MEAT PRODUCTS, UNCANNED	.06850	57.50000	4089.00000	.68900	.01160
27	DAIRY PRODUCTS	.08970	*****	4089.00000	.68900	.05790
27-1	EVAPORATED AND CONDENSED MILK	.08970	136.50000	4089.00000	.68900	.05790
27-2	ICE CREAM	.08970	*****	4089.00000	.68900	.05790
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	.08970	276.80000	4089.00000	.68900	.05790
28	RICE MILLING	.03800	*****	4089.00000	.68900	.06560
29	SUGAR MILLING AND REFINING	.07960	289.40000	4089.00000	.68900	.05300
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	.07460	111.70000	4089.00000	.68900	.15130
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	.07460	*****	4089.00000	.68900	.15130
31-1	FISH CANNING	.11870	37.70000	4089.00000	.68900	.01060
31-2	OTHER FISH AND SEAFOOD PRODUCTS	.11870	37.70000	4089.00000	.68900	.01060
32-1	CORN MILLING	.04890	*****	4089.00000	.68900	.06550
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	.04890	254.30000	4089.00000	.68900	.06550
33	BAKERY PRODUCTS	.06670	30.00000	4089.00000	.68900	.11610
34-1	CANDY AND CONFECTIONERY PRODUCTS	.07770	3.50000	4089.00000	.68900	.06760
34-2	CHOCOLATE AND CONFECTIONERY PRODUCTS	.07770	87.10000	4089.00000	.68900	.06760
35	DESSICATED COCONUT PRODUCTS	.08090	18.50000	4089.00000	.68900	.03530
36	OTHER MANUFACTURED FOODS	.07650	*****	4089.00000	.68900	.08530
36-1	PROCESSED COFFEE	.07650	142.60000	4089.00000	.68900	.08530
36-2	STARCH AND STARCH BY-PRODUCTS	.07650	64.90000	4089.00000	.68900	.08530
36-3	MACARONI, SPAGHETTI AND NOODLES	.07650	6.60000	4089.00000	.68900	.08530
36-4	VEGETABLE OIL AND MARGARINE	.07650	*****	4089.00000	.68900	.08530
36-5	PREPARED FEEDS FOR ANIMALS AND FOWLS	.07650	105.20000	4089.00000	.68900	.08530
36-6	FLAVORING EXTRACTS	.07650	*****	4089.00000	.68900	.08530
36-7	MISC. FOOD MANUFACTURES, N.E.C.	.07650	307.70000	4089.00000	.68900	.08530
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	.10920	65.70000	5361.00000	1.64000	.04280
37-2	WINE	.10920	65.70000	5361.00000	1.64000	.04280
37-3	BREWERY AND MALT PRODUCTS	.10920	65.70000	5361.00000	1.64000	.04280
38	SOFT DRINKS AND CARBONATED WATER	.13170	*****	5667.00000	2.50000	.02600
39-1	CIGARETTES	.07000	61.00000	5667.00000	2.50000	.02600
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	.07000	61.00000	5667.00000	2.50000	.02600
39-3	LEAF TOBACCO PROCESSING	.07000	*****	5667.00000	2.50000	.02600
40-1	TEXTILE MILL PRODUCTS	.06320	81.30000	3847.00000	1.72700	.04810
40-2	KNITTING MILL PRODUCTS	.06320	35.70000	3847.00000	1.72700	.04810
41-1	CORDBAGE, TWINE AND NET INDUSTRIES	.10420	42.00000	3847.00000	1.72700	.04810
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	.10420	*****	3847.00000	1.72700	.04810
41-3	OTHER TEXTILE PRODUCTS	.10420	103.50000	3847.00000	1.72700	.04810
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC	.23180	9.10000	2767.00000	1.39900	.02860
43	OTHER WEARING APPAREL	.19770	*****	2767.00000	1.39900	.02860
43-1	READY-MADE CLOTHING	.19770	8.30000	2767.00000	1.39900	.02860
44-1	MANUFACTURES OF EMBROIDERED PRODUCTS	.10170	10.60000	2767.00000	1.39900	.04730
44-2	OTHER MADE-UP TEXTILE GOODS	.10170	4.10000	2767.00000	1.39900	.04730
45	LUMBER	.07790	33.20000	5175.00000	1.71200	.25200

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ANNEX TABLE 1 (CONT). DATA USED FOR RANKING MANUFACTURING INDUSTRIES
(NOTE: STARS INDICATE NG DATA)

I-C CODE	SECTOR/ INDUSTRY	WAGE INTEN.	K/L RATIO I	LABOR PRD. I	CAPITAL EFF. I	ENERGY EFF.
46	PLYWOOD AND VENEER PLANTS	.09540	54.20000	5175.00000	1.71200	.19560
47	FURNITURE AND FIXTURES	.20230	7.60000	4212.00000	.87100	.04910
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	.16360	49.70000	4212.00000	.87100	.04230
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	.16360	240.50000	4212.00000	.87100	.04230
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	.14510	300.70000	10323.00000	.14300	.15640
50-1	PAPER PRODUCTS	.17730	45.80000	10323.00000	.14300	.11740
50-2	PAPER AND PAPERBOARD CONTAINERS	.17730	61.70000	10323.00000	.14300	.11740
50-3	MISC. CONVENTED PAPER PRODUCTS, N.E.C.	.17730	124.50000	10323.00000	.14300	.11740
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	.17440	*****	6694.00000	1.40600	.06850
51-1	BOOKS AND PAMPHLETS	.17440	15.20000	6694.00000	1.40600	.06860
52-1	COMMERCIAL AND JOB PRINTING	.23920	*****	6694.00000	1.40600	.03000
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	.23920	*****	6694.00000	1.40600	.03000
53-1	TANNING AND LEATHER FINISHING	.13740	23.50000	4586.00000	.96000	.04410
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	.13740	11.00000	4586.00000	.96000	.04410
54	RUBBER FOOTWEAR	.09730	34.30000	11185.00000	1.34200	.06140
55	TUBES AND INVENTURES MFG. AND REWINDING	.10720	150.50000	11185.00000	1.34200	.10570
56	OTHER RUBBER AND RELATED PRODUCTS	.11190	302.40000	11185.00000	1.34200	.06300
57-1	COMPRESSED AND LIQUEFIED GASES	.09510	*****	17869.00000	.92200	.22610
57-2	BASIC INDUSTRIAL CHEMICALS	.09510	364.10000	17869.00000	.92200	.22610
58	COCONUT OIL	.16150	201.70000	17869.00000	.92200	.03250
59	OTHER OILS AND FATS	.09900	201.70000	17869.00000	.92200	.06970
60	FERTILIZER AND LIME	.08860	266.40000	17869.00000	.92200	.17480
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	.11390	115.20000	17869.00000	.92200	.06980
62	PLASTIC MATERIALS	.08350	162.90000	17869.00000	.92200	.10770
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	.10500	61.70000	17869.00000	.92200	.09330
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	.07520	103.90000	17869.00000	.92200	.07270
65-1	COSMETICS AND TOILET PREPARATIONS	.11740	*****	17869.00000	.92200	.09140
65-2	INSECTICIDES, GERMICIDES AND AGRICULTURAL CHEMICALS	.11740	96.00000	17869.00000	.92200	.09140
65-3	OTHER CHEMICAL PRODUCTS	.11740	*****	17869.00000	.92200	.09140
66-1	PETROLEUM REFINERIES	.04840	2943.30000	16563.00000	.16800	.02490
66-2	PRODUCTS OF PETROLEUM, COKE AND COAL	.04840	96.00000	16563.00000	.16800	.02490
67	HYDRAULIC CEMENT	.09840	714.60000	4602.00000	.65000	1.15840
68-1	STRUCTURAL CLAY PRODUCTS	.15300	117.20000	4602.00000	.65000	.15820
68-2	STRUCTURAL CONCRETE PRODUCTS	.13300	55.20000	4602.00000	.65000	.15620
69	GLASS AND GLASS PRODUCTS	.09820	129.40000	4602.00000	.65000	.35680
70-1	POTTERY, CHINA AND EARTHENWARE	.16350	72.20000	4602.00000	.65000	.05810
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	.16350	*****	4602.00000	.65000	.05810
71	BASIC FERROUS METAL INDUSTRIES	.04530	290.70000	9585.00000	1.29600	.20140
72	BASIC NON-FERROUS METAL INDUSTRIES	.05970	89.40000	9585.00000	1.29600	.20440
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	.06500	77.50000	8779.00000	1.54300	.11850
74	STRUCTURAL METAL PRODUCTS	.10120	52.00000	8779.00000	1.54300	.07840
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	.09320	48.90000	8779.00000	1.54300	.08220
76-1	METAL CANS, BOXES AND CONTAINERS	.09210	52.40000	8779.00000	1.54300	.10660
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	.09210	70.60000	8779.00000	1.54300	.10660
76-3	FABRICATED WIRE PRODUCTS	.09210	60.50000	8779.00000	1.54300	.10660

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ANNEX TABLE 1 (CONT). DATA USED FOR RANKING MANUFACTURING INDUSTRIES
(NOTE: STARS INDICATE NO DATA)

I-C CODE	SECTOR/ INDUSTRY	WAGE INTEN.	R/L RATIO I	LABOR PRD. I	CAPITAL EFF. I	ENERGY EFF.
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	.09210	473.10000	8779.00000	1.54300	.10660
77	AGRICULTURAL MACHINERY AND EQUIPMENT	.11100	95.80000	9089.00000	1.60600	.02590
78	SPECIAL INDUSTRY MACHINERY	.14420	33.60000	9089.00000	1.60600	.06020
79	GENERAL INDUSTRY MACHINERY AND EQUIPT., EXCL. ELEC.	.12820	24.80000	9089.00000	1.60600	.09190
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	.14520	*****	9089.00000	1.60600	.02130
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	.16440	*****	9154.00000	1.16900	.06780
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	.16440	*****	9154.00000	1.16900	.06780
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	.12520	30.20000	9154.00000	1.16900	.11620
83	BATTERIES	.12220	83.60000	9154.00000	1.16900	.05680
84-1	ELECTRICAL LAMPS AND FIXTURES	.11890	690.20000	9154.00000	1.16900	.11570
84-2	ELECTRICAL WIRES AND WIRING DEVICES	.11890	690.20000	9154.00000	1.16900	.11570
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONES	.11540	690.20000	9154.00000	1.16900	.04850
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	.13900	*****	9154.00000	1.16900	.06100
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND PARTS	.10210	690.20000	9154.00000	1.16900	.10030
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	.21470	118.00000	3064.00000	.40900	.02790
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	.21470	118.00000	3064.00000	.40900	.02790
89	REPAIR OF MOTOR VEHICLES	.18650	118.00000	3064.00000	.40900	.06350
90	SHIPBUILDING AND REPAIRING	.18100	32.50000	3064.00000	.40900	.08240
91-1	MOTORCYCLES, BICYCLES AND PARTS	.15700	*****	3064.00000	.40900	.05910
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	.15700	125.30000	3064.00000	.40900	.05510
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	.12420	*****	7689.00000	2.17400	.05410
92-2	MUSICAL INSTRUMENTS	.12420	*****	7689.00000	2.17400	.05410
92-3	FABRICATED PLASTIC PRODUCTS	.12420	17.10000	7689.00000	2.17400	.05410
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	.12420	*****	7689.00000	2.17400	.05410
92-5	MEDICAL, DENTOPEDIC AND SURGICAL SUPPLIES	.12420	*****	7689.00000	2.17400	.05410
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	.12420	*****	7689.00000	2.17400	.05410
92-7	SPORTS EQUIPMENT AND SUPPLIES	.12420	*****	7689.00000	2.17400	.05410
92-8	PEN, PENCIL, OFFICE AND ARTISTS' SUPPLIES	.12420	*****	7689.00000	2.17400	.05410
92-9	TOYS, GAMES, PARLOR GAMES, EXCL. PLASTIC/RUBBER	.12420	*****	7689.00000	2.17400	.05410
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	.12420	7.60000	7689.00000	2.17400	.05410

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ANNEX TABLE 1 (CONT). DATA USED FOR RANKING MANUFACTURING INDUSTRIES
(NOTE: STARS INDICATE NO DATA)

I-C CODE	CNC	EXPORT C/NEX	IMPORT DEF.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	H/F TOTAL EMP. RATIO
26-1	8.00000	.01290	*****	.99672	.84040	1.26700	.43650
26-2	8.26000	.01290	*****	.99672	.84040	1.26700	.43650
26-3	9.43000	.01290	*****	.99672	.84040	1.26700	.43650
27	*****	.06660	*****	1.56467	.77640	1.28500	.43650
27-1	1.67000	.06660	*****	1.56467	.77640	1.28500	.43650
27-2	8.10000	.06660	*****	1.56467	.77640	1.28500	.43650
27-3	18.13000	.06660	*****	1.56467	.77640	1.28500	.43650
28	9.86000	.00000	*****	1.05387	.66380	1.24400	.43650
29	8.40000	.75160	.00250	.24838	.70120	1.08250	.43650
30-1	10.33000	.43070	*****	.60452	1.05840	1.24480	.43650
30-2	9.94000	.43070	*****	.60452	1.05840	1.24480	.43650
31-1	6.33000	.11230	*****	1.07003	1.05840	1.24480	.43650
31-2	9.36000	.11230	*****	1.07003	1.05840	1.24480	.43650
32-1	7.45000	.00070	*****	1.06720	1.05840	1.24480	.43650
32-2	26.02000	.00070	*****	1.06720	1.05840	1.24480	.43650
33	15.68000	.01850	*****	.98148	1.05840	1.24480	.43650
34-1	15.18000	.06890	*****	.93189	1.05840	1.24480	.43650
34-2	10.34000	.06890	*****	.93189	1.05840	1.24480	.43650
35	4.69000	.77170	*****	.22227	1.05840	1.24480	.43650
36	*****	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-1	9.97000	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-2	10.55000	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-3	9.44000	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-4	*****	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-5	8.08000	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-6	*****	.03100	.06120	1.01843	1.05840	1.24480	.43650
36-7	23.97000	.03100	.06120	1.01843	1.05840	1.24480	.43650
37-1	15.61000	.01890	.03910	1.00175	.67710	1.02590	.52820
37-2	*****	.01890	.03910	1.00175	.67710	1.02590	.52820
37-3	*****	.01890	.03910	1.00175	.67710	1.02590	.52820
38	9.04000	.00310	.03910	.99706	.67710	1.02590	.52820
39-1	18.23000	.01020	.08630	.99293	.72870	1.04870	.40350
39-2	8.15000	.01020	.08630	.99293	.72870	1.04870	.40350
39-3	26.26000	.01020	.08630	.99293	.72870	1.04870	.40350
40-1	12.15000	.04440	.38980	1.26338	1.42980	1.43060	.59590
40-2	6.92000	.04440	.38980	1.26338	1.42980	1.43060	.59590
41-1	10.10000	.23190	.38980	.99876	1.42980	1.43060	.59590
41-2	*****	.23190	.38980	.99876	1.42980	1.43060	.59590
41-3	8.18000	.23190	.38980	.99876	1.42980	1.43060	.59590
42	6.47000	.07280	.10070	.92851	.64930	1.33520	.89590
43	*****	.10060	.10070	.90514	.64930	1.33520	.89590
43-1	5.13000	.10060	.10070	.90514	.64930	1.33520	.89590
44-1	5.74000	.09610	.10070	.91034	.64930	1.33520	.89590
44-2	6.45000	.09610	.10070	.91034	.64930	1.33520	.89590
45	8.14000	.19940	.04320	.80182	.81600	1.24640	.57770

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ANNEX TABLE 1 (CONT). DATA USED FOR RANKING MANUFACTURING INDUSTRIES
(NUMBERS IN STARS INDICATE NO DATA)

I-C CODE	CRC	EXPORT C/ITA	IMPORT DEF.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	F/FH TOTAL EMP. RATIO
46	6.48000	.37250	.64320	.62752	.68270	1.18500	.57770
47	5.77000	.22120	.12520	.80108	.65140	1.21440	.71130
48-1	11.53000	.42550	.12520	.60290	.65140	1.21440	.71130
48-2	10.18000	.42550	.12520	.60290	.65140	1.21440	.71130
49	9.14000	.08200	.21360	1.71513	1.55320	1.12190	.43170
50-1	11.10000	.00480	.21360	1.14160	1.55320	1.12190	.43170
50-2	11.47000	.00480	.21360	1.14160	1.55320	1.12190	.43170
50-3	10.22000	.00480	.21360	1.14160	1.55320	1.12190	.43170
51	5.23000	.01090	.13880	1.20234	.73000	1.06390	.33800
51-1	8.17000	.01090	.13880	1.20234	.73000	1.06390	.33800
52-1	6.67000	.00320	.13880	1.04806	.73000	1.06390	.33800
52-2	*****	.00320	.13880	1.04806	.73000	1.06390	.33800
53-1	9.55000	.11110	.11150	.98765	.67170	1.24740	.66450
53-2	6.25000	.11110	.11150	.98765	.67170	1.24740	.66450
54	20.36000	.00600	.30570	.99488	.77480	1.29800	.41020
55	9.85000	.00260	.30570	1.06805	.77480	1.29800	.41020
56	28.41000	.06660	.30570	2.20380	.77480	1.29800	.41020
57-1	6.35000	.06110	.28300	4.99155	1.81160	1.14640	.48410
57-2	10.06000	.06110	.28300	4.99155	1.81160	1.14640	.48410
58	5.48000	.71730	.01830	.26270	.97910	.99160	.48410
59	7.54000	.50070	.01830	5.87801	.97910	.99160	.48410
60	6.98000	.00002	.28300	2.25027	2.12950	1.26050	.48410
61	15.30000	.01020	.28300	1.14580	2.12950	1.26050	.48410
62	7.51000	.07200	.28300	3.10949	2.12950	1.26050	.48410
63	6.53000	.01680	.28300	1.33025	2.12950	1.26050	.48410
64	10.39000	.00580	.28300	1.00116	2.12950	1.26050	.48410
65-1	139.00000	.01790	.28300	1.30614	2.12950	1.26050	.48410
65-2	4.03000	.01790	.28300	1.30614	2.12950	1.26050	.48410
65-3	*****	.01790	.28300	1.30614	2.12950	1.26050	.48410
66-1	8.96000	.01190	.51310	1.06089	2.68010	1.09460	.40340
66-2	6.12000	.01190	.51310	1.06089	2.68010	1.09460	.40340
67	7.09000	.21230	.08160	.79496	.72050	1.27920	.40340
68-1	7.98000	.09620	.11370	1.14658	.81640	1.13120	.40340
68-2	9.79000	.09620	.11370	1.14658	.81640	1.13120	.40340
69	11.09000	.04520	.11370	1.15456	.81640	1.13120	.40340
70-1	8.68000	.10340	.11370	1.58686	.81640	1.13120	.40340
70-2	*****	.10340	.11370	1.58686	.81640	1.13120	.40340
71	13.06000	.00120	.51210	1.94983	2.84280	1.56830	.44310
72	5.05000	.40130	.51210	2.18790	2.84280	1.56830	.44310
73	13.74000	.03650	.25270	4.73016	.93480	1.46100	.47630
74	9.89000	.01570	.25270	1.31850	.93480	1.46100	.47630
75	9.76000	.00520	.25270	1.32170	.93480	1.46100	.47630
76-1	8.78000	.00290	.25270	1.29200	.93480	1.46100	.47630
76-2	7.26000	.00290	.25270	1.29200	.93480	1.46100	.47630
76-3	6.47000	.00290	.25270	1.29200	.93480	1.46100	.47630

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ANNEX TABLE 1 (CONT.). DATA USED FOR RANKING MANUFACTURING INDUSTRIES
(NOTE: STARS INDICATE NO DATA)

I-C CODE	CAC	EXPORT GRIEN	IMPORT DEF.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	F/F TOTAL EFF. RATIO
76-4	25.52000	.00290	.25270	1.29200	.93480	1.46100	.47630
77	5.87000	.00400	.17380	2.87016	.70100	1.17920	.82440
78	4.75000	.24180	.17380	25.54566	.70100	1.17920	.82440
79	5.98000	.03410	.17380	5.42198	.70100	1.17920	.82440
80	*****	.00590	.17380	4.00687	.70100	1.17920	.82440
81-1	5.80000	.01890	.14470	2.99537	.75510	1.14120	.56490
81-2	*****	.01690	.14470	2.99537	.75510	1.14120	.56490
82	14.55000	.12820	.14470	5.32914	.75510	1.14120	.56490
83	5.45000	.00920	.14470	1.02611	.75510	1.14120	.56490
84-1	8.35000	.01460	.14470	2.85936	.75510	1.14120	.56490
84-2	*****	.01460	.14470	2.85936	.75510	1.14120	.56490
85	*****	.01540	.14470	1.26642	.75510	1.14120	.56490
86	14.91000	.00200	.14470	1.25338	.75510	1.14120	.56490
87	12.37000	.00420	.14470	1.47556	.75510	1.14120	.56490
88-1	*****	.00070	.00000	1.70298	.69430	1.01140	.84120
88-2	9.82000	.00070	.00000	1.70298	.69430	1.01140	.84120
89	*****	.00840	.00000	3.55939	.69430	1.01140	.84120
90	6.45000	.03950	.00000	6.58328	.64670	1.09000	.84120
91-1	7.23000	.00030	.00000	5.45650	.64670	1.09000	.84120
91-2	*****	.00030	.00000	5.45650	.64670	1.09000	.84120
92-1	*****	.07620	.26680	1.45789	.72610	1.24130	.85280
92-2	*****	.07620	.26680	1.45789	.72610	1.24130	.85280
92-3	23.24000	.07620	.26680	1.45789	.72610	1.24130	.85280
92-4	4.31000	.07620	.26680	1.45789	.72610	1.24130	.85280
92-5	4.39000	.07620	.26680	1.45789	.72610	1.24130	.85280
92-6	*****	.07620	.26680	1.45789	.72610	1.24130	.85280
92-7	*****	.07620	.26680	1.45789	.72610	1.24130	.85280
92-8	*****	.07620	.26680	1.45789	.72610	1.24130	.85280
92-9	*****	.07620	.26680	1.45789	.72610	1.24130	.85280
92-10	6.75000	.07620	.26680	1.45789	.72610	1.24130	.85280

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ANNEX TABLE 2. DATA USED FOR FARRING OTHER SECONDARY AND TERTIARY SECTOR INDUSTRIES
(NOTE: STARS INDICATE NO DATA)

I-C CODE	SECTOR/ INDUSTRY	WAGE INTEN.	K/L RATIO II	LABOR PRD. II	CAPITAL EFF. II	ENERGY EFF.
93	SCRAP	.10390	*****	*****	*****	.00140
94	ELECTRICITY	.10860	476.63000	59.07226	.12394	.57080
95	GAS	.13060	476.63000	59.07226	.12394	.71150
96	WATER	.25920	476.63000	59.07226	.12394	.21210
97	CONSTRUCTION	.20990	5.74700	158.30700	27.54671	.04490
98	W/POLESALE TRADE	.23310	3.65800	17.84080	4.87756	.05210
99	RETAIL TRADE	.23700	3.65800	17.84080	4.87756	.03210
100	BANKING	.21520	*****	*****	*****	.01710
101	NON-BANKING FINANCIAL INSTITUTIONS	.22520	*****	*****	*****	.01140
102	LIFE AND NON-LIFE INSURANCE	.29270	36.27200	103.91039	2.86479	.00910
103	REAL ESTATE	.11460	60.44100	173.99057	2.87867	.01430
104	RAILROAD TRANSPORT	.37240	8.06300	12.50902	1.55144	.27080
105	OTHER LAND TRANSPORT	.24990	8.06300	12.50902	1.55144	.26540
106	WATER TRANSPORT	.16050	23.91400	18.67923	.78110	.23170
107	AIR TRANSPORT	.14670	82.28200	75.94519	.92298	.30570
108	SERVICES INCIDENTAL TO TRANSPORT	.11060	3.65600	75.71739	20.38101	.04260
109	STORAGE AND WAREHOUSING	.21840	11.63900	75.71739	20.38101	.02490
110	COMMUNICATION	.33020	97.50900	47.39448	.48605	.02880
111	PRIVATE EDUCATIONAL SERVICES	.29990	15.09400	8.87535	.58800	.06180
112	PRIVATE MEDICAL SERVICES	.33400	16.19500	30.06491	1.65644	.09060
113	PROFESSIONAL SERVICES	.27560	4.97500	24.47504	7.13522	.02490
114	ADVERTISING SERVICES	.32050	4.35600	24.47504	7.13522	.01270
115	OTHER BUSINESS SERVICES, N.E.C.	.27080	2.43300	24.47504	7.13522	.05900
116	RECREATIONAL SERVICES	.20250	19.32000	32.82185	1.69890	.07180
117	DRINKING AND EATING PLACES	.13410	1.27300	6.89313	2.24924	.04630
118	HOTELS AND OTHER LODGING PLACES	.17230	31.67600	6.89313	2.24924	.13640
119	PERSONAL SERVICES	.42090	2.59000	20.77663	8.02234	.02390

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ANNEX TABLE 2 (CONT). DATA USED FOR RANKING OTHER SECONDARY AND TERTIARY SECTOR INDUSTRIES
 (NOTE: STARS INDICATE NO DATA)

I-C CODE	EXPORT CPIER	DOMESTIC DEPART	FORWARD LINKAGES	BACKWARD LINKAGES
93	0.00000	1.00000	.67480	1.14730
94	.00270	.99729	1.13190	1.09280
95	.06970	.93050	1.13190	1.09280
96	.01460	.98543	1.13190	1.09280
97	.00550	.99807	.70960	1.15000
98	.23180	.76823	3.19720	.75730
99	0.00000	1.00000	3.19720	.75730
100	0.00000	1.00000	.72340	.75870
101	0.00000	1.00000	.72340	.75870
102	.03160	1.04393	.62360	.72470
103	.09450	.91577	.94330	.76090
104	.23240	.80553	1.12090	1.00680
105	.06400	.94330	1.12090	1.00680
106	.32380	.74664	1.12090	1.00680
107	.09480	1.00085	1.12090	1.00680
108	.09720	.90636	1.12090	1.00680
109	.03380	1.03796	.61470	.71600
110	.06030	.97020	.72910	.76880
111	.06490	1.05263	1.75140	.94330
112	.03720	1.03731	1.75140	.94330
113	.05980	.99371	1.75140	.94330
114	.01640	1.01104	1.75140	.94330
115	1.06920	.94944	1.75140	.94330
116	.05930	.98246	1.75140	.94330
117	.09240	.96890	1.75140	.94330
118	.29240	.95823	1.75140	.94330
119	.02110	.98692	1.75140	.94330

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ANNEX TABLE 3. ASSIGNED RANKS FOR MANUFACTURING INDUSTRIES
FOR EACH CRITERION (NOTE: STARS INDICATE NO DATA)

I-C CODE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO 1	LABOR PROC. 1	CAPITAL EFF. 1	ENERGY EFF.	DRC
26-1	SLAUGHTERING AND POULTRY DRESSING	109.0	****	91.0	89.0	4.0	42.0
26-2	MEAT PRODUCTS, CANNED	109.0	32.3	91.0	89.0	4.0	47.0
26-3	MEAT PRODUCTS, UNCANNED	109.0	32.5	91.0	89.0	4.0	54.0
27	DAIRY PRODUCTS	83.5	****	91.0	89.0	45.5	****
27-1	EVAPORATED AND CONDENSED MILK	83.5	65.0	91.0	89.0	49.5	1.0
27-2	ICE CREAM	83.5	****	91.0	89.0	49.5	44.0
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	83.5	74.0	91.0	89.0	49.5	87.0
28	RICE MILLING	120.0	****	91.0	89.0	60.0	61.0
29	SUGAR MILLING AND REFINING	90.0	75.0	91.0	89.0	34.0	25.0
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	103.5	56.0	91.0	89.0	105.5	69.0
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	103.5	****	91.0	89.0	105.5	63.0
31-1	FISH CANNING	47.5	22.5	91.0	89.0	1.5	22.5
31-2	OTHER FISH AND SEAFOOD PRODUCTS	49.5	22.5	91.0	89.0	1.5	53.0
32-1	CORN MILLING	115.5	****	91.0	89.0	58.5	39.0
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	115.5	72.0	91.0	89.0	58.5	93.0
33	BAKERY PRODUCTS	87.0	15.0	91.0	89.0	99.0	86.0
34-1	CANDY AND CHEWING GUM PRODUCTS	92.5	1.0	91.0	89.0	61.5	83.0
34-2	COCCA AND CHOCOLATE PRODUCTS	92.5	48.0	91.0	89.0	61.5	70.0
35	DESSICATED COCONUT PRODUCTS	89.0	12.0	91.0	89.0	19.0	6.0
36	OTHER MANUFACTURED FOODS	97.5	****	91.0	89.0	79.5	****
36-1	PROCESSED COFFEE	97.5	66.0	91.0	89.0	79.5	64.0
36-2	STARCH AND STARCH BY-PRODUCTS	97.5	39.0	91.0	89.0	79.5	72.0
36-3	PACARON, SPAGHETTI AND NOODLES	97.5	3.0	91.0	89.0	79.5	55.0
36-4	VEGETABLE LARD AND MARGARINE	97.5	****	91.0	89.0	79.5	****
36-5	PREPARED FEEDS FOR ANIMALS AND FOWLS	97.5	55.0	91.0	89.0	79.5	43.0
36-6	FLAVORING EXTRACTS	97.5	****	91.0	89.0	79.5	****
36-7	MISC. FOOD MANUFACTURES, N.E.C.	97.5	81.0	91.0	89.0	79.5	91.0
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	59.0	41.0	62.5	22.5	23.0	85.0
37-2	WINES	59.0	41.0	62.5	22.5	23.0	****
37-3	BREWERY AND MALT PRODUCTS	59.0	41.0	62.5	22.5	23.0	****
38	SOFTDRINKS AND CARBONATED WATER	33.0	****	62.5	22.5	96.0	51.0
39-1	CIGARETTES	106.0	34.5	59.0	2.0	11.0	88.0
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	106.0	55.5	59.0	2.0	11.0	20.0
39-3	LEAF TOBACCO PROCESSING	106.0	****	59.0	2.0	11.0	94.0
40-1	TEXTILE MILL PRODUCTS	112.5	36.0	107.0	16.0	111.5	77.0
40-2	KNITTING MILL PRODUCTS	112.5	21.0	107.0	16.0	111.5	33.0
41-1	CORDAGE, TWINE AND NET INDUSTRIES	64.0	24.0	107.0	16.0	30.0	66.5
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	64.0	****	107.0	16.0	30.0	****
41-3	OTHER TEXTILE PRODUCTS	64.0	53.0	107.0	16.0	30.0	45.0
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC	3.0	7.0	118.0	42.0	15.0	28.5

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ANNEX TABLE 3. (CONT.)

I-G CODE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO I	LABOR PROD. I	CAPITAL EFF. I	ENERGY EFF.	DRC
43	OTHER WEARING APPAREL	7.5	*****	112.0	42.0	73.5	*****
43-1	READY-MADE CLOTHING	7.5	6.0	118.0	42.0	73.5	10.0
44-1	MANUFACTURES OF EMBROIDERED PRODUCTS	67.5	8.0	118.0	42.0	27.5	13.0
44-2	OTHER MADE-UP TEXTILE GOODS	67.5	2.0	118.0	42.0	27.5	26.5
45	LUMBER	91.0	18.0	65.5	19.5	118.0	19.0
46	PLYWOOD AND VENEER PLANTS	74.0	30.0	65.5	19.5	113.0	30.0
47	FURNITURE AND FIXTURES	6.0	4.5	76.0	74.0	33.0	14.0
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	18.5	27.0	76.0	74.0	20.5	76.0
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	18.5	71.0	76.0	74.0	20.5	66.5
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	26.0	77.0	19.5	118.5	109.0	52.0
50-1	PAPER PRODUCTS	12.0	25.0	19.5	118.5	102.0	74.0
50-2	PAPER AND PAPERBOARD CONTAINERS	12.0	37.5	19.5	118.5	102.0	75.0
50-3	MISC. CONVERTED PAPER PRODUCTS, N.E.C.	12.0	62.0	19.5	118.5	102.0	68.0
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	14.5	*****	55.5	37.5	65.5	15.0
51-1	BOOKS AND PAMPHLETS	14.5	10.0	55.5	37.5	65.5	46.0
52-1	COMMERCIAL AND JOB PRINTING	1.5	*****	55.5	37.5	16.5	31.0
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	1.5	*****	55.5	37.5	16.5	*****
53-1	TANNING AND LEATHER FINISHING	29.5	13.0	73.5	59.5	25.5	56.0
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	29.5	9.0	73.5	59.5	25.5	21.0
54	RUBBER FOOTWEAR	73.0	20.0	16.0	46.0	56.0	89.0
55	TIRES AND INNERTUBES MFG. AND RETREADING	61.0	68.0	16.0	46.0	90.0	60.0
56	OTHER RUBBER AND RELATED PRODUCTS	56.0	78.0	16.0	46.0	75.0	95.0
57-1	COMPRESSED AND LIQUEFIED GASES	75.5	*****	6.5	66.5	116.5	24.0
57-2	BASIC INDUSTRIAL CHEMICALS	75.5	79.0	6.5	66.5	116.5	65.0
58	COCKNUT OIL	22.0	69.5	6.5	66.5	18.0	2.0
59	OTHER OILS AND FATS	70.0	69.5	6.5	66.5	67.0	38.0
60	FERTILIZER AND LIME	86.0	73.0	6.5	66.5	110.0	34.0
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	55.0	57.0	6.5	66.5	68.0	84.0
62	PLASTIC MATERIALS	88.0	67.0	6.5	66.5	95.0	40.0
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	62.0	37.5	6.5	66.5	88.0	22.5
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	102.0	54.0	6.5	66.5	69.0	71.0
65-1	COSMETICS AND TOILET PREPARATIONS	52.0	*****	6.5	66.5	85.0	96.0
65-2	INSECTICIDES, GERMICIDES AND AGRICULTURAL CHEMICALS	52.0	51.5	6.5	66.5	85.0	3.0
65-3	OTHER CHEMICAL PRODUCTS	52.0	*****	6.5	66.5	85.0	*****
66-1	PETROLEUM REFINERIES	117.5	87.0	13.5	115.5	7.5	50.0
66-2	PRODUCTS OF PETROLEUM, COKE AND CCAL	117.5	51.5	13.5	115.5	7.5	18.0
67	HYDRAULIC CEMENT	71.0	86.0	69.5	105.5	120.0	35.0
68-1	STRUCTURAL CLAY PRODUCTS	31.5	58.0	69.5	105.5	107.5	41.0
68-2	STRUCTURAL CONCRETE PRODUCTS	31.5	31.0	69.5	105.5	107.5	58.0
69	GLASS AND GLASS PRODUCTS	72.0	64.0	69.5	105.5	119.0	73.0

ANNEX TABLE 3. (CONT.)

I-C CODE	SECTOR/ INDUSTRY	WAGE IN TEN	K/L RATIO I	LABOR PROD. I	CAPITAL EFF. I	ENERGY EFF.	DRC
70-1	PCTERY, CHINA AND EARTHENWARE	20.5	45.0	69.5	105.5	52.5	49.0
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	20.5	****	69.5	105.5	52.5	****
71	BASIC FERROUS METAL INDUSTRIES	119.0	76.0	22.5	48.5	114.0	79.0
72	BASIC NON-FERROUS METAL INDUSTRIES	114.0	43.6	22.5	48.5	115.0	9.0
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	111.0	46.0	40.0	32.0	104.0	80.0
74	STRUCTURAL METAL PRODUCTS	69.0	28.0	40.0	32.0	70.0	62.0
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	77.0	26.0	40.0	32.0	71.0	57.0
76-1	METAL CANS, BOXES AND CONTAINERS	79.5	29.0	40.0	32.0	92.5	8.0
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	79.5	44.0	40.0	32.0	92.5	37.0
76-3	FABRICATED WIRE PRODUCTS	79.5	49.0	40.0	32.0	92.5	28.5
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	79.5	80.0	40.0	32.0	92.5	92.0
77	AGRICULTURAL MACHINERY AND EQUIPMENT	57.0	50.0	34.5	26.5	9.0	16.0
78	SPECIAL INDUSTRY MACHINERY	27.0	19.0	34.5	26.5	54.0	7.0
79	GENERAL INDUSTRY MACHINERY AND EQUIPT., EXCL. ELEC.	34.0	14.0	34.5	26.5	87.0	17.0
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	25.0	****	34.5	26.5	6.0	****
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	16.5	****	28.0	54.0	63.5	11.0
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	16.5	****	28.0	54.0	63.5	****
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	35.0	16.0	28.0	54.0	100.0	81.0
83	BATTERIES	46.0	47.0	28.0	54.0	47.0	12.0
84-1	ELECTRICAL LAMPS AND FIXTURES	47.5	83.5	28.0	54.0	97.5	48.0
84-2	ELECTRICAL WIRES AND WIRING DEVICES	47.5	83.5	28.0	54.0	97.5	****
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONES	54.0	63.5	28.0	54.0	32.0	****
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	28.0	****	28.0	54.0	55.0	82.0
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND PARTS	66.0	83.5	28.0	54.0	89.0	78.0
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	4.5	60.0	112.5	111.5	13.5	****
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	4.5	60.0	112.5	111.5	13.5	59.0
89	REPAIR OF MOTOR VEHICLES	9.0	60.0	112.5	111.5	57.0	****
90	SHIPBUILDING AND REPAIRING	10.0	17.0	112.5	111.5	72.0	26.5
91-1	MOTORCYCLES, BICYCLES AND PARTS	23.5	****	112.5	111.5	45.5	36.0
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	23.5	63.0	112.5	111.5	45.5	****
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	40.5	****	48.5	8.5	39.5	****
92-2	MUSICAL INSTRUMENTS	40.5	****	48.5	8.5	39.5	****
92-3	FABRICATED PLASTIC PRODUCTS	40.5	11.0	48.5	8.5	39.5	90.0
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	40.5	****	48.5	8.5	39.5	4.0
92-5	MEDICAL, CHIROPODIC AND SURGICAL SUPPLIES	40.5	****	48.5	8.5	39.5	5.0
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	40.5	****	48.5	8.5	39.5	****
92-7	SPORTS EQUIPMENT AND SUPPLIES	40.5	****	48.5	8.5	39.5	****
92-8	PEN, PENCIL, OFFICE AND ARTISTS' SUPPLIES	40.5	****	48.5	8.5	39.5	****
92-9	TOYS, DOLLS, PARLOR GAMES, EXCL. PLASTIC/RUBBER	40.5	****	48.5	8.5	39.5	****
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	40.5	4.5	48.5	8.5	39.5	32.0

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ANNEX TABLE 3. (CONT.)

I-C CODE	SECTOR/ INDUSTRY	EXPCRT ORIENT.	IMPORT DEP.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	HH/TOTAL EMP. RATIO
26-1	SLAUGHTERING AND POULTRY DRESSING	82.0	*****	94.0	52.0	29.0	85.0
26-2	MEAT PRODUCTS, CANNED	82.0	*****	94.0	52.0	29.0	85.0
26-3	MEAT PRODUCTS, UNCANNED	82.0	*****	94.0	52.0	29.0	85.0
27	DAIRY PRODUCTS	48.0	*****	29.5	61.5	24.5	85.0
27-1	EVAPORATED AND CONDENSED MILK	48.0	*****	29.5	61.5	24.5	85.0
27-2	ICE CREAM	48.0	*****	29.5	61.5	24.5	85.0
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	48.0	*****	29.5	61.5	24.5	85.0
28	RICE MILLING	120.0	*****	73.0	109.0	60.0	85.0
29	SUGAR MILLING AND REFINING	2.0	1.0	119.0	94.0	104.0	85.0
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	6.5	*****	114.5	32.5	50.5	85.0
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	6.5	*****	114.5	32.5	50.5	85.0
31-1	FISH CANNING	19.5	*****	66.5	32.5	50.5	85.0
31-2	OTHER FISH AND SEAFOOD PRODUCTS	19.5	*****	66.5	32.5	50.5	85.0
32-1	CORN MILLING	114.5	*****	69.5	32.5	50.5	85.0
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	72.0	*****	102.0	32.5	50.5	85.0
33	BAKERY PRODUCTS	44.5	*****	103.5	32.5	50.5	85.0
34-1	CANDY AND CHEWING GUM PRODUCTS	44.5	*****	103.5	32.5	50.5	85.0
34-2	COCCA AND CHOCOLATE PRODUCTS	1.0	*****	120.0	32.5	50.5	85.0
35	DESSICATED COCONUT PRODUCTS	62.5	13.5	80.5	32.5	50.5	85.0
36	OTHER MANUFACTURED FOODS	62.5	13.5	80.5	32.5	50.5	85.0
36-1	PROCESSED COFFEE	62.5	13.5	80.5	32.5	50.5	85.0
36-2	STARCH AND STARCH BY-PRODUCTS	62.5	13.5	80.5	32.5	50.5	85.0
36-3	MACARONI, SPAGHETTI AND NOODLES	62.5	13.5	80.5	32.5	50.5	85.0
36-4	VEGETABLE LARD AND MARGARINE	62.5	13.5	80.5	32.5	50.5	85.0
36-5	PREPARED FEEDS FOR ANIMALS AND FOWLS	62.5	13.5	80.5	32.5	50.5	85.0
36-6	FLAVORING EXTRACTS	62.5	13.5	80.5	32.5	50.5	85.0
36-7	MISC. FOOD MANUFACTURES, N.E.C.	69.0	5.5	86.0	104.5	113.5	48.5
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	69.0	5.5	86.0	104.5	113.5	48.5
37-2	WINES	69.0	5.5	86.0	104.5	113.5	48.5
37-3	BREWERY AND MALT PRODUCTS	105.0	5.5	92.0	104.5	113.5	48.5
38	SOFTDRINKS AND CARBONATED WATER	89.5	26.0	98.0	81.0	110.0	107.0
39-1	CIGARETTES	89.5	26.0	98.0	81.0	110.0	107.0
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	89.5	26.0	98.0	81.0	110.0	107.0
39-3	LEAF TOBACCO PROCESSING	54.5	96.0	53.5	21.0	12.0	33.0
40-1	TEXTILE MILL PRODUCTS	54.5	96.0	53.5	21.0	12.0	33.0
40-2	KNITTING MILL PRODUCTS	13.0	96.0	90.0	21.0	12.0	33.0
41-1	CORDAGE, TWINE AND NET INDUSTRIES	13.0	96.0	90.0	21.0	12.0	33.0
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	13.0	96.0	90.0	21.0	12.0	33.0
41-3	OTHER TEXTILE PRODUCTS	42.0	30.0	105.0	115.0	17.0	3.0
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC						

ANNEX TABLE 3. (CONT.)

I-C CODE	SECTOR/ INDUSTRY	EXPORT CRIEN.	IMPORT DEP.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	HH/TOTAL EMP. RATIO
43	OTHER WEARING APPAREL	25.5	30.0	108.5	115.0	17.0	3.0
43-1	READY-MADE CLOTHING	25.5	30.0	108.5	115.0	17.0	3.0
44-1	MANUFACTURES OF EMPROIDERED PRODUCTS	29.5	30.0	106.5	115.0	17.0	3.0
44-2	OTHER MADE-UP TEXTILE GOODS	29.5	30.0	106.5	115.0	17.0	3.0
45	LUMBER	17.0	8.5	110.0	59.0	41.0	36.5
46	PLYWOOD AND VENEER PLANTS	10.0	8.5	113.0	102.0	74.0	36.5
47	FURNITURE AND FIXTURES	15.0	41.0	111.0	111.0	72.0	27.0
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	8.5	41.0	116.5	111.0	72.0	27.0
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	8.5	41.0	116.5	111.0	72.0	27.0
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	31.0	61.5	23.0	16.5	96.5	100.5
50-1	PAPER PRODUCTS	99.0	61.5	63.0	16.5	96.5	100.5
50-2	PAPER AND PAPERBOARD CONTAINERS	99.0	61.5	63.0	16.5	96.5	100.5
50-3	MISC. CONVERTED PAPER PRODUCTS, N.E.C.	99.0	61.5	63.0	16.5	96.5	100.5
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	86.5	44.5	57.5	77.5	106.5	118.5
51-1	BOOKS AND PAMPHLETS	86.5	44.5	57.5	77.5	106.5	118.5
52-1	COMMERCIAL AND JOB PRINTING	103.5	44.5	74.5	77.5	106.5	118.5
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	103.5	44.5	74.5	77.5	106.5	118.5
53-1	TANNING AND LEATHER FINISHING	21.5	33.5	100.5	107.5	39.5	29.5
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	21.5	33.5	100.5	107.5	39.5	29.5
54	RUBBER FOOTWEAR	94.0	92.0	96.0	65.0	21.0	104.0
55	TIRES AND INNERTUBES MFG. AND RETREADING	110.0	92.0	68.0	65.0	21.0	104.0
56	OTHER RUBBER AND RELATED PRODUCTS	48.0	92.0	20.0	65.0	21.0	104.0
57-1	COMPRESSED AND LIQUEFIED GASES	51.5	85.5	8.5	13.5	79.5	56.5
57-2	BASIC INDUSTRIAL CHEMICALS	51.5	85.5	8.5	13.5	79.5	56.5
58	COCKLE OIL	3.0	2.5	118.0	42.5	119.5	56.5
59	OTHER OILS AND FATS	4.0	2.5	3.0	42.5	119.5	56.5
60	FERTILIZER AND LIME	119.0	85.5	19.0	8.5	34.5	56.5
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	89.5	85.5	61.0	8.5	34.5	56.5
62	PLASTIC MATERIALS	43.0	85.5	13.0	8.5	34.5	56.5
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	76.0	85.5	43.0	8.5	34.5	56.5
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	96.0	85.5	88.0	8.5	34.5	56.5
65-1	COSMETICS AND TOILET PREPARATIONS	74.0	85.5	47.0	8.5	34.5	56.5
65-2	INSECTICIDES, GERMICIDES AND AGRICULTURAL CHEMICALS	74.0	85.5	47.0	8.5	34.5	56.5
65-3	OTHER CHEMICAL PRODUCTS	74.0	85.5	47.0	8.5	34.5	56.5
66-1	PETROLEUM REFINERIES	84.5	101.5	71.5	3.5	99.5	112.5
66-2	PRODUCTS OF PETROLEUM, COKE AND COAL	84.5	101.5	71.5	3.5	99.5	112.5
67	HYDRAULIC CEMENT	16.0	24.0	112.0	93.0	27.0	112.5
68-1	STRUCTURAL CLAY PRODUCTS	27.5	37.0	59.5	56.0	92.0	112.5
68-2	STRUCTURAL CONCRETE PRODUCTS	27.5	37.0	59.5	56.0	92.0	112.5
69	GLASS AND GLASS PRODUCTS	53.0	37.0	65.0	56.0	92.0	112.5

ANNEX TABLE 3: (CONT.)

I-C CODE	SECTOR/ INDUSTRY	EXPORT CRIEN.	IMPORT DEP.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	HH/TOTAL EMP. RATIO
70-1	POTTERY, CHINA AND EARTHENWARE	23.5	37.0	26.5	56.0	92.0	112.5
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	23.5	37.0	26.5	56.0	92.0	112.5
71	BASIC FERROUS METAL INDUSTRIES	112.0	99.5	22.0	1.5	1.5	70.5
72	BASIC NON-FERROUS METAL INDUSTRIES	5.0	99.5	21.0	1.5	1.5	70.5
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	57.0	67.0	10.0	47.0	6.0	66.0
74	STRUCTURAL METAL PRODUCTS	77.0	67.0	45.0	47.0	6.0	66.0
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	97.0	67.0	44.0	47.0	6.0	66.0
76-1	METAL CANS, BOXES AND CONTAINERS	107.5	67.0	50.5	47.0	6.0	66.0
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	107.5	67.0	50.5	47.0	6.0	66.0
76-3	FABRICATED WIRE PRODUCTS	107.5	67.0	50.5	47.0	6.0	66.0
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	107.5	67.0	50.5	47.0	6.0	66.0
77	AGRICULTURAL MACHINERY AND EQUIPMENT	102.0	57.5	16.0	96.5	76.5	23.5
78	SPECIAL INDUSTRY MACHINERY	11.0	57.5	1.0	96.5	76.5	23.5
79	GENERAL INDUSTRY MACHINERY AND EQUIP., EXCL. ELEC.	58.0	57.5	6.0	96.5	76.5	23.5
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	95.0	57.5	11.0	96.5	76.5	23.5
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	69.0	51.0	14.5	71.0	85.0	42.0
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	69.0	51.0	14.5	71.0	85.0	42.0
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	18.0	51.0	7.0	71.0	85.0	42.0
83	BATTERIES	92.0	51.0	7.0	71.0	85.0	42.0
84-1	ELECTRICAL LAMPS AND FIXTURES	79.5	51.0	17.5	71.0	85.0	42.0
84-2	ELECTRICAL WIRES AND WIRING DEVICES	79.5	51.0	17.5	71.0	85.0	42.0
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONES	78.0	51.0	55.0	71.0	85.0	42.0
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	111.0	51.0	56.0	71.0	85.0	42.0
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND WARES	101.0	51.0	32.0	71.0	85.0	42.0
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	114.5	20.5	24.5	100.0	117.0	18.5
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	114.5	20.5	24.5	100.0	117.0	18.5
89	REPAIR OF MOTOR VEHICLES	93.0	20.5	12.0	100.0	117.0	18.5
90	SHIPBUILDING AND REPAIRING	56.0	20.5	2.0	119.0	102.0	18.5
91-1	MOTORCYCLES, BICYCLES AND PARTS	117.5	20.5	4.5	119.0	102.0	18.5
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	117.5	20.5	4.5	119.0	102.0	18.5
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	36.5	75.5	37.5	87.5	65.5	10.5
92-2	MUSICAL INSTRUMENTS	36.5	75.5	37.5	87.5	65.5	10.5
92-3	FABRICATED PLASTIC PRODUCTS	36.5	75.5	37.5	87.5	65.5	10.5
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	36.5	75.5	37.5	87.5	65.5	10.5
92-5	MEDICAL, ORTHOPEDIC AND SURGICAL SUPPLIES	36.5	75.5	37.5	87.5	65.5	10.5
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	36.5	75.5	37.5	87.5	65.5	10.5
92-7	SPORTS EQUIPMENT AND SUPPLIES	36.5	75.5	37.5	87.5	65.5	10.5
92-8	PEN, PENCIL, OFFICE AND ARTISTS' SUPPLIES	36.5	75.5	37.5	87.5	65.5	10.5
92-9	TOYS, DOLLS, PARLOR GAMES, EXCL. PLASTIC/RUBBER	36.5	75.5	37.5	87.5	65.5	10.5
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	36.5	75.5	37.5	87.5	65.5	10.5

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ANNEX TABLE 4. ASSIGNED RANKS FOR OTHER SECONDARY AND TERTIARY SECTOR INDUSTRIES
FOR EACH CRITERION. (NOTE: STARS INDICATE NO DATA)

J-C CODE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO II	LABOR PRCD. II	CAPITAL EFF. II	ENERGY EFF.	EXPORT ORIEN.
93	SCRAP	27.0	*****	*****	*****	1.0	25.5
94	ELECTRICITY	26.0	23.0	8.0	23.0	26.0	23.0
95	GAS	23.0	23.0	8.0	23.0	27.0	10.0
96	WATER	10.0	23.0	8.0	23.0	21.0	21.0
97	CONSTRUCTION	17.0	9.0	2.0	1.0	13.0	22.0
98	WHOLESALE TRADE	13.0	5.5	18.5	8.5	15.0	5.0
99	RETAIL TRADE	12.0	5.5	18.5	8.5	11.0	25.5
100	BANKING	16.0	*****	*****	*****	6.0	25.5
101	NON-BANKING FINANCIAL INSTITUTIONS	14.0	*****	*****	*****	3.0	25.5
102	LIFE AND NON-LIFE INSURANCE	7.0	18.0	3.0	11.0	2.0	18.0
103	REAL ESTATE	24.0	19.0	1.0	10.0	5.0	8.0
104	RAILROAD TRANSPORT	2.0	10.5	20.5	16.5	24.0	4.0
105	OTHER LAND TRANSPORT	11.0	10.5	20.5	16.5	23.0	12.0
106	WATER TRANSPORT	20.0	16.0	17.0	19.0	22.0	2.0
107	AIR TRANSPORT	21.0	20.0	4.0	18.0	25.0	7.0
108	SERVICES INCIDENTAL TO TRANSPORT	25.0	4.0	5.5	2.5	12.0	6.0
109	STORAGE AND WAREHOUSING	15.0	12.0	5.5	2.5	8.5	17.0
110	COMMUNICATION	4.0	21.0	10.0	21.0	10.0	13.0
111	PRIVATE EDUCATIONAL SERVICES	6.0	13.0	22.0	20.0	17.0	11.0
112	PRIVATE MEDICAL SERVICES	3.0	14.0	12.0	14.0	15.0	16.0
113	PROFESSIONAL SERVICES	8.0	8.0	14.0	6.0	8.5	14.0
114	ADVERTISING SERVICES	5.0	7.0	14.0	6.0	4.0	20.0
115	OTHER BUSINESS SERVICES, N.E.C.	9.0	2.0	14.0	6.0	16.0	1.0
116	RECREATIONAL SERVICES	18.0	15.0	11.0	15.0	18.0	15.0
117	DRINKING AND EATING PLACES	22.0	1.0	23.5	12.5	14.0	9.0
118	HOTELS AND OTHER LODGING PLACES	19.0	17.0	23.5	12.5	20.0	3.0
119	PERSONAL SERVICES	1.0	3.0	16.0	4.0	7.0	19.0

ANNEX TABLE 4. (CONT.)

I-G CODE	SECTOR/ INDUSTRY	DOMESTIC DEPEND	FORWARD LINKAGES	BACKWARD LINKAGES
93	SCRAP	8.5	26.0	2.0
94	ELECTRICITY	12.0	13.0	4.0
95	GAS	22.0	13.0	4.0
96	WATER	15.0	13.0	4.0
97	CONSTRUCTION	11.0	25.0	1.0
98	WHOLESALE TRADE	26.0	1.5	24.5
99	RETAIL TRADE	8.5	1.5	24.5
100	BANKING	8.5	23.5	22.5
101	NON-BANKING FINANCIAL INSTITUTIONS	8.5	23.5	22.5
102	LIFE AND NON-LIFE INSURANCE	2.0	21.0	26.0
103	REAL ESTATE	23.0	20.0	21.0
104	RAILROAD TRANSPORT	25.0	17.0	8.0
105	OTHER LAND TRANSPORT	21.0	17.0	8.0
106	WATER TRANSPORT	27.0	17.0	8.0
107	AIR TRANSPORT	6.0	17.0	8.0
108	SERVICES INCIDENTAL TO TRANSPORT	24.0	17.0	8.0
109	STORAGE AND WAREHOUSING	3.0	27.0	27.0
110	COMMUNICATION	17.0	22.0	20.0
111	PRIVATE EDUCATIONAL SERVICES	1.0	7.0	15.0
112	PRIVATE MEDICAL SERVICES	4.0	7.0	15.0
113	PROFESSIONAL SERVICES	13.0	7.0	15.0
114	ADVERTISING SERVICES	5.0	7.0	15.0
115	OTHER BUSINESS SERVICES, N.E.C.	20.0	7.0	15.0
116	RECREATIONAL SERVICES	16.0	7.0	15.0
117	DRINKING AND EATING PLACES	18.0	7.0	15.0
118	HOTELS AND OTHER LODGING PLACES	19.0	7.0	15.0
119	PERSONAL SERVICES	14.0	7.0	15.0

ANNEX TABLE 5. PERCENTILE RANKS FOR MANUFACTURING INDUSTRIES
FOR EACH CRITERION (NOTE: STARS INDICATE NO DATA)

I-C CGCE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO I	LABOR PROC. I	CAPITAL EFF. I	ENERGY EFF.	DRC
26-1	SLAUGHTERING AND POULTRY DRESSING	9.6	****	24.6	26.3	97.1	56.8
26-2	MEAT PRODUCTS, CANNED	9.6	63.2	24.6	26.3	97.1	51.6
26-3	MEAT PRODUCTS, UNCANNED	9.6	63.2	24.6	26.3	97.1	44.3
27	DAIRY PRODUCTS	30.8	****	24.6	26.3	59.2	****
27-1	EVAPORATED AND CONDENSED MILK	30.8	25.9	24.6	26.3	59.2	99.5
27-2	ICE CREAM	30.8	****	24.6	26.3	59.2	54.7
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	30.8	15.5	24.6	26.3	59.2	9.9
28	RICE MILLING	.4	****	24.6	26.3	50.4	37.0
29	SUGAR MILLING AND REFINING	25.4	14.4	24.6	26.3	72.1	74.5
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	14.2	36.2	24.6	26.3	12.5	28.6
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	14.2	****	24.6	26.3	12.5	34.9
31-1	FISH CANNING	59.2	74.7	24.6	26.3	99.2	77.1
31-2	OTHER FISH AND SEAFOOD PRODUCTS	59.2	74.7	24.6	26.3	99.2	45.3
32-1	CORN MILLING	4.2	****	24.6	26.3	51.7	59.9
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	4.2	17.8	24.6	26.3	51.7	3.6
33	BAKERY PRODUCTS	27.9	83.3	24.6	26.3	17.9	10.9
34-1	CANDY AND CHEWING GUM PRODUCTS	23.3	99.4	24.6	26.3	49.2	14.1
34-2	COCOA AND CHOCOLATE PRODUCTS	23.3	45.4	24.6	26.3	49.2	27.6
35	ESSICATED COCONUT PRODUCTS	26.3	86.4	24.6	26.3	44.6	94.3
36	OTHER MANUFACTURED FOODS	19.2	****	24.6	26.3	34.2	****
36-1	PROCESSED COFFEE	19.2	24.7	24.6	26.3	34.2	33.9
36-2	STARCH AND STARCH BY-PRODUCTS	19.2	55.7	24.6	26.3	34.2	25.5
36-3	PACARONI, SPAGHETTI AND NOODLES	19.2	97.1	24.6	26.3	34.2	43.2
36-4	VEGETABLE LARD AND MARGARINE	19.2	****	24.6	26.3	34.2	****
36-5	PREPARED FEEDS FOR ANIMALS AND FEEDS	19.2	37.4	24.6	26.3	34.2	55.7
36-6	FLAVORING EXTRACTS	19.2	****	24.6	26.3	34.2	****
36-7	MISC. FOOD MANUFACTURES, N.E.C.	19.2	7.5	24.6	26.3	34.2	5.7
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	51.3	53.4	48.3	81.7	81.3	12.0
37-2	WINES	51.3	53.4	48.3	81.7	81.3	****
37-3	BREWERY AND MALT PRODUCTS	51.3	53.4	48.3	81.7	81.3	****
38	SOFTDRINKS AND CARBONATED WATER	72.9	****	48.3	81.7	20.4	47.4
39-1	CIGARETTES	12.1	60.9	51.3	98.8	91.3	8.9
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	12.1	60.9	51.3	98.8	91.3	79.7
39-3	LEAF TOBACCO PROCESSING	12.1	****	51.3	98.8	91.3	2.6
40-1	TEXTILE MILL PRODUCTS	6.7	59.2	11.3	87.1	7.5	20.3
40-2	KNITTING MILL PRODUCTS	6.7	76.4	11.3	87.1	7.5	66.1
41-1	CORDAGE, TWINE AND NET INDUSTRIES	47.1	73.0	11.3	87.1	75.4	31.3
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	47.1	****	11.3	87.1	75.4	****
41-3	OTHER TEXTILE PRODUCTS	47.1	39.7	11.3	87.1	75.4	53.6
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC	97.9	92.5	2.1	65.4	87.9	70.8

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ANNEX TABLE 5. (CONT.)

I-O CODE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO I	LABOR PROD. I	CAPITAL EFF. I	ENERGY EFF.	DRC
43	OTHER WEARING APPAREL	94.2	*****	2.1	65.4	39.2	*****
43-1	READY-MADE CLOTHING	94.2	93.7	2.1	65.4	39.2	90.1
44-1	MANUFACTURES OF EMBROIDERED PRODUCTS	44.2	91.4	2.1	65.4	77.5	87.0
44-2	OTHER MADE-UP TEXTILE GOODS	44.2	92.3	2.1	65.4	77.5	72.9
45	LUMBER	24.6	79.9	45.2	84.2	2.1	80.7
46	PLYWOOD AND VENEER PLANTS	38.8	66.1	45.2	84.2	6.3	69.3
47	FURNITURE AND FIXTURES	95.4	95.4	37.1	38.2	72.9	85.9
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	85.0	69.5	37.1	38.2	83.3	21.4
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	85.0	19.0	37.1	38.2	83.3	31.3
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	78.2	12.1	84.2	1.7	9.6	46.4
50-1	PAPER PRODUCTS	90.4	71.8	84.2	1.7	15.4	23.4
50-2	PAPER AND PAPERBOARD CONTAINERS	90.4	57.5	84.2	1.7	15.4	22.4
50-3	MISC. CONVERTED PAPER PRODUCTS, N.E.C.	90.4	29.3	84.2	1.7	15.4	29.7
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	88.3	*****	54.2	69.2	45.2	24.9
51-1	BOOKS AND PAMPHLETS	88.3	89.1	54.2	69.2	45.2	52.6
52-1	COMMERCIAL AND JOB PRINTING	99.2	*****	54.2	69.2	86.7	68.2
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	99.2	*****	54.2	69.2	86.7	*****
53-1	TANNING AND LEATHER FINISHING	75.8	85.6	39.2	50.8	79.2	42.2
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	75.8	90.2	39.2	50.8	79.2	72.6
54	RUBBER FOOTWEAR	39.6	77.6	87.1	62.1	53.2	7.8
55	TIRES AND INNERTUBES MFG. AND RETREADING	49.6	22.4	87.1	62.1	25.4	38.0
56	OTHER RUBBER AND RELATED PRODUCTS	53.8	10.9	87.1	62.1	37.9	1.6
57-1	COMPRESSED AND LIQUEFIED GASES	37.5	*****	95.0	45.0	3.3	75.5
57-2	BASIC INDUSTRIAL CHEMICALS	37.5	9.8	95.0	45.0	3.3	32.8
58	COCONUT OIL	82.1	20.7	95.0	45.0	85.4	98.4
59	OTHER OILS AND FATS	42.1	20.7	95.0	45.0	44.6	60.9
60	FERTILIZER AND LIME	28.8	16.7	95.0	45.0	8.2	65.1
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	54.6	35.1	95.0	45.0	43.8	13.0
62	PLASTIC MATERIALS	27.1	23.6	95.0	45.0	21.3	58.9
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	48.8	57.5	95.0	45.0	27.1	77.1
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	15.4	38.5	95.0	45.0	42.9	26.6
65-1	COSMETICS AND TOILET PREPARATIONS	57.1	*****	95.0	45.0	29.6	.5
65-2	INSECTICIDES, GERMICIDES AND AGRICULTURAL CHEMICALS	57.1	41.4	95.0	45.0	29.6	97.4
65-3	OTHER CHEMICAL PRODUCTS	57.1	*****	95.0	45.0	29.6	*****
66-1	PETROLEUM REFINERIES	2.5	.6	89.2	4.2	94.2	48.4
66-2	PRODUCTS OF PETROLEUM, COKE AND COAL	2.5	41.4	89.2	4.2	94.2	81.8
67	HYDRALLIC CEMENT	41.3	1.7	42.5	12.5	.4	64.1
68-1	STRUCTURAL CLAY PRODUCTS	74.2	33.9	42.5	12.5	10.8	57.8
68-2	STRUCTURAL CONCRETE PRODUCTS	74.2	34.9	42.5	12.5	10.8	40.1
69	GLASS AND GLASS PRODUCTS	40.4	27.0	42.5	12.5	1.3	24.5

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ANNEX TABLE 5. (CONT.)

I-O CODE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO I	LABOR PROP. 1	CAPITAL EFF. 1	ENERGY EFF.	DRC
70-1	POTTERY, CHINA AND EARTHENWARE	83.3	48.9	42.5	12.5	56.7	49.5
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	83.3	****	42.5	12.5	56.7	****
71	BASIC FERROUS METAL INDUSTRIES	1.3	13.2	81.7	60.0	5.4	18.2
72	BASIC NON-FERROUS METAL INDUSTRIES	5.4	51.1	81.7	60.0	4.6	91.1
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	7.9	47.7	67.1	73.8	13.8	17.2
74	STRUCTURAL METAL PRODUCTS	42.9	68.4	67.1	73.8	42.1	35.9
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	36.3	70.7	67.1	73.8	41.3	41.1
76-1	METAL CANS, BOXES AND CONTAINERS	34.2	67.2	67.1	73.8	23.3	92.2
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	34.2	50.0	67.1	73.8	23.3	62.0
76-3	FABRICATED WIRE PRODUCTS	34.2	44.3	67.1	73.8	23.3	70.8
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	34.2	8.6	67.1	73.8	23.3	4.7
77	AGRICULTURAL MACHINERY AND EQUIPMENT	52.9	43.1	71.7	78.3	52.9	63.9
78	SPECIAL INDUSTRY MACHINERY	77.9	78.7	71.7	78.3	55.4	93.2
79	GENERAL INDUSTRY MACHINERY AND EQUIP., EXCL. ELEC.	72.1	64.5	71.7	78.3	27.5	82.8
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	79.6	****	71.7	78.3	95.4	****
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	86.7	****	77.1	55.4	47.5	89.1
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	86.7	****	77.1	55.4	47.5	****
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	71.3	82.2	77.1	55.4	17.1	16.1
83	BATTERIES	62.1	46.6	77.1	55.4	61.3	88.0
84-1	ELECTRICAL LAMP AND FIXTURES	60.8	4.6	77.1	55.4	19.2	50.5
84-2	ELECTRICAL WIRES AND WIRING DEVICES	60.8	4.6	77.1	55.4	19.2	****
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONES	55.4	4.6	77.1	55.4	73.8	****
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	77.1	****	77.1	55.4	54.6	15.1
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND WARES	45.4	4.6	77.1	55.4	26.3	19.3
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	96.7	31.6	6.7	7.5	89.2	****
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	96.7	31.6	6.7	7.5	89.2	39.1
89	REPAIR OF MOTOR VEHICLES	92.9	31.6	6.7	7.5	52.9	****
90	SHIPBUILDING AND REPAIRING	92.1	51.0	6.7	7.5	40.4	72.9
91-1	MOTORCYCLES, BICYCLES AND PARTS	80.8	****	6.7	7.5	62.5	63.0
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	80.8	28.2	6.7	7.5	62.5	****
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	66.7	****	60.0	93.3	67.5	****
92-2	MUSICAL INSTRUMENTS	66.7	****	60.0	93.3	67.5	****
92-3	FABRICATED PLASTIC PRODUCTS	66.7	87.9	60.0	93.3	67.5	6.8
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	66.7	****	60.0	93.3	67.5	96.4
92-5	MEDICAL, ORTHOPEDIC AND SURGICAL SUPPLIES	66.7	****	60.0	93.3	67.5	95.3
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	66.7	****	60.0	93.3	67.5	****
92-7	SPORTS EQUIPMENT AND SUPPLIES	66.7	****	60.0	93.3	67.5	****
92-8	FEW, FENCIL, OFFICE AND ARTISTS' SUPPLIES	66.7	****	60.0	93.3	67.5	****
92-9	TOYS, COLLS, PARLOR GAMES, EXCL. PLASTIC/RUBBER	66.7	****	60.0	93.3	67.5	****
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	66.7	95.4	60.0	93.3	67.5	67.2

ANNEX TABLE 5. (CONT.)

I-C CODE	SECTOR/ INDUSTRY	EXPORT ORIEN.	IMPORT DEP.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	HH/TOTAL EMP. RATIO
26-1	SLAUGHTERING AND POULTRY DRESSING	32.1	*****	22.1	57.1	76.3	29.6
26-2	MEAT PRODUCTS, CANNED	32.1	*****	22.1	57.1	76.3	29.6
26-3	MEAT PRODUCTS, UNCANNED	32.1	*****	22.1	57.1	76.3	29.6
27	DAIRY PRODUCTS	60.4	*****	75.8	49.2	80.0	29.6
27-1	EVAPORATED AND CONDENSED MILK	60.4	*****	75.8	49.2	80.0	29.6
27-2	ICE CREAM	60.4	*****	75.8	49.2	80.0	29.6
27-3	BUTTER, CHEESE AND OTHER DAIRY PRODUCTS	60.4	*****	75.8	49.2	80.0	29.6
28	RICE MILLING	.4	*****	39.6	9.6	50.4	29.6
29	SUGAR MILLING AND REFINING	98.8	99.5	1.3	22.1	13.8	29.6
30-1	CANNED FRUITS AND VEGETABLE PRODUCTS	95.0	*****	5.0	73.3	58.3	29.6
30-2	OTHER FRUITS AND VEGETABLE PRODUCTS	95.0	*****	5.0	73.3	58.3	29.6
31-1	FISH CANNING	84.2	*****	45.0	73.3	58.3	29.6
31-2	OTHER FISH AND SEAFOOD PRODUCTS	84.2	*****	45.0	73.3	58.3	29.6
32-1	CORN MILLING	5.0	*****	42.5	73.3	58.3	29.6
32-2	FLOUR MILLING, CEREAL AND FLOUR-BLENDED PRODUCTS	5.0	*****	42.5	73.3	58.3	29.6
33	BAKERY PRODUCTS	40.4	*****	15.4	73.3	58.3	29.6
34-1	CANDY AND CHEWING GUM PRODUCTS	63.3	*****	14.2	73.3	58.3	29.6
34-2	COCCA AND CHOCOLATE PRODUCTS	63.3	*****	14.2	73.3	58.3	29.6
35	DESSICATED COCONUT PRODUCTS	99.6	*****	.4	73.3	58.3	29.6
36	OTHER MANUFACTURED FOODS	48.3	87.3	33.3	73.3	58.3	29.6
36-1	PROCESSED COFFEE	48.3	87.3	33.3	73.3	58.3	29.6
36-2	STARCH AND STARCH BY-PRODUCTS	48.3	87.3	33.3	73.3	58.3	29.6
36-3	MACARONI, SPAGHETTI AND NOODLES	48.3	87.3	33.3	73.3	58.3	29.6
36-4	VEGETABLE LARD AND MARGARINE	48.3	87.3	33.3	73.3	58.3	29.6
36-5	PREPARED FEEDS FOR ANIMALS AND FOWLS	48.3	87.3	33.3	73.3	58.3	29.6
36-6	FLAVORING EXTRACTS	48.3	87.3	33.3	73.3	58.3	29.6
36-7	MISC. FOOD MANUFACTURES, N.E.C.	48.3	87.3	33.3	73.3	58.3	29.6
37-1	DISTILLED, RECTIFIED AND BLENDED LIQUORS	42.9	95.1	28.8	13.3	5.8	60.0
37-2	WINES	42.9	95.1	28.8	13.3	5.8	60.0
37-3	BREWERY AND MALT PRODUCTS	42.9	95.1	28.8	13.3	5.8	60.0
38	SOFTDRINKS AND CARBONATED WATER	12.9	95.1	23.8	13.3	5.8	60.0
39-1	CIGARETTES	25.8	75.0	18.8	32.9	8.8	11.3
39-2	CIGAR, CHEWING AND SMOKING TOBACCO	25.8	75.0	18.8	32.9	8.8	11.3
39-3	LEAF TOBACCO PROCESSING	25.8	75.0	18.8	32.9	8.8	11.3
40-1	TEXTILE MILL PRODUCTS	55.0	6.4	55.8	82.9	90.4	72.9
40-2	KNITTING MILL PRODUCTS	55.0	6.4	55.8	82.9	90.4	72.9
41-1	CORDAGE, TWINE AND NET INDUSTRIES	89.6	6.4	25.4	82.9	90.4	72.9
41-2	CARPETS, RUGS AND LINOLEUM INCLUDING MATS	89.6	6.4	25.4	82.9	90.4	72.9
41-3	OTHER TEXTILE PRODUCTS	89.6	6.4	25.4	82.9	90.4	72.9
42	FOOTWEAR, EXCEPT RUBBER AND PLASTIC	65.4	71.1	12.9	4.6	86.3	97.9

ANNEX TABLE 5. (CONT.)

I-C CODE	SECTOR/ INDUSTRY	EXPORT ORIEN.	IMPORT DEP.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	HH/TOTAL EMP. RATIO
43	OTHER WEARING APPAREL	79.2	71.1	10.0	4.6	86.3	97.9
43-1	READY-MADE CLOTHING	79.2	71.1	10.0	4.6	86.3	97.9
44-1	MANUFACTURES OF EMBROIDERED PRODUCTS	75.8	71.1	11.7	4.6	86.3	97.9
44-2	OTHER MADE-UP TEXTILE GOODS	75.8	71.1	11.7	4.6	86.3	97.9
45	LUMBER	86.3	92.2	0.8	51.3	66.3	70.0
46	PLYWOOD AND VENEER PLANTS	92.1	92.2	6.3	15.4	38.8	70.0
47	FURNITURE AND FIXTURES	87.9	60.3	7.9	7.9	40.4	77.9
48-1	DOORS, WINDOWS AND OTHER MILLWORKS	93.3	60.3	3.3	7.9	40.4	77.9
48-2	OTHER WOOD, CANE AND CORK PRODUCTS	93.3	60.3	3.3	7.9	40.4	77.9
49	PULP, PAPER AND PAPERBOARD MANUFACTURING	74.6	40.2	81.3	86.7	20.0	16.7
50-1	PAPER PRODUCTS	17.9	40.2	47.9	86.7	20.0	16.7
50-2	PAPER AND PAPERBOARD CONTAINERS	17.9	40.2	47.9	86.7	20.0	16.7
50-3	MISC. (CONVERTED PAPER PRODUCTS, N.F.C.)	17.9	40.2	47.9	86.7	20.0	16.7
51	NEWSPAPERS, PERIODICALS, BOOKS AND PAMPHLETS	28.3	56.9	52.5	35.8	11.7	1.7
51-1	BOOKS AND PAMPHLETS	28.3	56.9	52.5	35.8	11.7	1.7
52-1	COMMERCIAL AND JOB PRINTING	14.2	56.9	38.3	35.8	11.7	1.7
52-2	BOOKBINDING AND OTHER ALLIED ACTIVITIES	14.2	56.9	38.3	35.8	11.7	1.7
53-1	TANNING AND LEATHER FINISHING	62.5	67.6	16.7	10.8	67.5	75.8
53-2	LEATHER PRODUCTS EXCEPT FOOTWEAR AND OTHER WEARING APPAREL	62.5	67.6	16.7	10.8	67.5	75.8
54	RUBBER FOOTWEAR	22.1	10.3	20.4	46.3	82.9	13.8
55	TIRES AND INNERTUBES MFG. AND RETREADING	8.8	10.3	43.8	46.3	82.9	13.8
56	OTHER RUBBER AND RELATED PRODUCTS	60.4	10.3	83.8	46.3	82.9	13.8
57-1	COMPRESSED AND LIQUEFIED GASES	57.5	16.7	93.3	89.2	34.2	53.3
57-2	BASIC INDUSTRIAL CHEMICALS	57.5	16.7	93.3	89.2	34.2	53.3
58	COGNAC OIL	97.9	98.0	2.1	65.0	.8	53.3
59	OTHER OILS AND FATS	97.1	98.0	97.9	65.0	.8	53.3
60	FERTILIZER AND LIME	1.3	16.7	84.6	93.3	71.7	53.3
61	PAINTS, VARNISHES AND RELATED COMPOUNDS	25.8	16.7	49.6	93.3	71.7	53.3
62	PLASTIC MATERIALS	64.6	16.7	89.6	93.3	71.7	53.3
63	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	37.1	16.7	64.6	93.3	71.7	53.3
64	SOAP AND OTHER WASHING AND CLEANSING COMPOUNDS	20.4	16.7	27.1	93.3	71.7	53.3
65-1	COSMETICS AND TOILET PREPARATIONS	38.8	16.7	61.3	93.3	71.7	53.3
65-2	INSECTICIDES, HERBICIDES AND AGRICULTURAL CHEMICALS	38.8	16.7	61.3	93.3	71.7	53.3
65-3	OTHER CHEMICAL PRODUCTS	38.8	16.7	61.3	93.3	71.7	53.3
66-1	PETROLEUM REFINERIES	30.0	1.0	40.8	97.5	17.5	6.7
66-2	PRODUCTS OF PETROLEUM, COKE AND COAL	30.0	1.0	40.8	97.5	17.5	6.7
67	HYDRAULIC CEMENT	87.1	77.0	7.1	22.9	77.9	6.7
68-1	STRUCTURAL CLAY PRODUCTS	77.5	64.2	50.8	53.8	23.8	6.7
68-2	STRUCTURAL CONCRETE PRODUCTS	77.5	64.2	50.8	53.8	23.8	6.7
69	GLASS AND GLASS PRODUCTS	56.3	64.2	46.3	53.8	23.8	6.7

I-C CODE	SECTOR/INDUSTRY	EXPORT ORIENT.	IMPORT DEP.	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES	HH/TOTAL EMP. RATIO
70-1	POTTERY, CHINA AND EARTHENWARE	80.8	64.2	78.3	53.8	23.8	6.7
70-2	OTHER NON-METALLIC MINERAL PRODUCTS	80.8	64.2	78.3	53.8	23.8	6.7
71	BASIC FERROUS METAL INDUSTRIES	7.1	2.9	82.1	99.2	99.2	41.7
72	BASIC NON-FERROUS METAL INDUSTRIES	96.3	2.9	82.9	99.2	99.2	41.7
73	CUTLERY, HANDTOOLS AND GEN. HARDWARE	52.9	34.8	62.1	61.3	95.4	45.4
74	STRUCTURAL METAL PRODUCTS	36.3	34.8	62.9	61.3	95.4	45.4
75	HEATING APPARATUS, LIGHTING AND PLUMBING FIXTURES	19.6	34.8	63.8	61.3	95.4	45.4
76-1	METAL CANS, BOXES AND CONTAINERS	10.8	34.8	58.3	61.3	95.4	45.4
76-2	STAMPED, COATED AND ENGRAVED METAL PRODUCTS	10.8	34.8	58.3	61.3	95.4	45.4
76-3	FABRICATED WIRE PRODUCTS	10.8	34.8	58.3	61.3	95.4	45.4
76-4	OTHER FABRICATED METAL PRODUCTS, N.E.C.	10.8	34.8	58.3	61.3	95.4	45.4
77	AGRICULTURAL MACHINERY AND EQUIPMENT	15.4	44.1	87.1	20.0	36.7	80.8
78	SPECIAL INDUSTRY MACHINERY	91.3	44.1	99.6	20.0	36.7	80.8
79	GENERAL INDUSTRY MACHINERY AND EQUIP., EXCL. ELEC.	52.1	44.1	95.4	20.0	36.7	80.8
80	OFFICE, COMPUTING AND ACCOUNTING MACHINES, EXCL. ELEC.	21.3	44.1	91.3	20.0	36.7	80.8
81-1	ELECTRICAL DISTRIBUTION AND CONTROL APPARATUS	42.9	50.5	88.3	41.3	29.6	65.4
81-2	OTHER ELECTRICAL INDUSTRIAL MACHINERY AND EQUIPMENT	42.9	50.5	88.3	41.3	29.6	65.4
82	COMMUNICATION EQUIPMENT, EXCL. RADIO, TV	85.4	50.5	94.6	41.3	29.6	65.4
83	BATTERIES	23.8	50.5	37.1	41.3	29.6	65.4
84-1	ELECTRICAL LAMPS AND FIXTURES	34.2	50.5	85.8	41.3	29.6	65.4
84-2	ELECTRICAL WIRES AND WIRING DEVICES	34.2	50.5	85.8	41.3	29.6	65.4
85	HOUSEHOLD RADIO, TV RECEIVING SETS, PHONES	35.4	50.5	54.6	41.3	29.6	65.4
86	REFRIGERATION AND AIRCONDITIONING EQUIPMENT	7.9	50.5	53.8	41.3	29.6	65.4
87	OTHER HOUSEHOLD ELECTRICAL APPLIANCES AND WARES	16.3	50.5	73.8	41.3	29.6	65.4
88-1	MOTOR VEHICLES, MANUFACTURED OR ASSEMBLED	5.0	80.4	80.0	17.1	2.9	85.0
88-2	MOTOR VEHICLE ENGINES, BODIES AND PARTS	5.0	80.4	80.0	17.1	2.9	85.0
89	REPAIR OF MOTOR VEHICLES	22.9	80.4	90.4	17.1	2.9	85.0
90	SHIPBUILDING AND REPAIRING	53.8	80.4	98.8	1.3	15.4	85.0
91-1	MOTORCYCLES, BICYCLES AND PARTS	2.5	80.4	96.7	1.3	15.4	85.0
91-2	OTHER TRANSPORT EQUIPMENT, N.E.C.	2.5	80.4	96.7	1.3	15.4	85.0
92-1	JEWELRY, SILVERWARE AND RELATED ARTICLES	70.0	26.5	69.2	27.5	45.8	91.7
92-2	MUSICAL INSTRUMENTS	70.0	26.5	69.2	27.5	45.8	91.7
92-3	FABRICATED PLASTIC PRODUCTS	70.0	26.5	69.2	27.5	45.8	91.7
92-4	MEASURING, CONTROLLING, SCIENTIFIC EQUIPMENT	70.0	26.5	69.2	27.5	45.8	91.7
92-5	MEDICAL, ORTHOPEDIC AND SURGICAL SUPPLIES	70.0	26.5	69.2	27.5	45.8	91.7
92-6	PHOTOGRAPHIC AND OPTICAL GOODS	70.0	26.5	69.2	27.5	45.8	91.7
92-7	SPORTS EQUIPMENT AND SUPPLIES	70.0	26.5	69.2	27.5	45.8	91.7
92-8	PEN, PENCIL, OFFICE AND ARTISTS' SUPPLIES	70.0	26.5	69.2	27.5	45.8	91.7
92-9	TOYS, DOLLS, PARLOR GAMES, EXCL. PLASTIC/RUBBER	70.0	26.5	69.2	27.5	45.8	91.7
92-10	MISCELLANEOUS MANUFACTURES, N.E.C.	70.0	26.5	69.2	27.5	45.8	91.7

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ANNEX TABLE 6. PERCENTILE RANKS FOR OTHER SECONDARY AND TERTIARY SECTOR INDUSTRIES
FOR EACH CRITERION (NOTE: STARS INDICATE NO DATA)

I-C CODE	SECTOR/ INDUSTRY	WAGE INTEN	K/L RATIO II	LABOR PROD. II	CAPITAL EFF. II	ENERGY EFF.	EXPORT ORIEN.
93	SCRAP	1.9	*****	*****	*****	98.1	7.4
94	ELECTRICITY	5.6	6.3	68.8	6.3	5.6	16.7
95	GAS	16.7	6.3	68.8	6.3	1.9	64.8
96	WATER	64.8	6.3	68.8	6.3	24.1	24.1
97	CONSTRUCTION	38.9	64.6	93.8	97.9	53.7	20.4
98	WHOLESALE TRADE	53.7	79.2	25.0	66.7	46.3	83.3
99	RETAIL TRADE	57.4	79.2	25.0	66.7	61.1	7.4
100	BANKING	42.6	*****	*****	*****	79.6	7.4
101	NON-BANKING FINANCIAL INSTITUTIONS	50.0	*****	*****	*****	90.7	7.4
102	LIFE AND NON-LIFE INSURANCE	75.9	27.1	89.6	56.3	94.4	35.2
103	REAL ESTATE	13.0	22.9	97.9	60.4	83.3	72.2
104	RAILROAD TRANSPORT	94.4	58.3	16.7	33.3	13.0	87.0
105	OTHER LAND TRANSPORT	61.1	58.3	16.7	33.3	16.7	57.4
106	WATER TRANSPORT	27.8	35.4	31.3	22.9	20.4	94.4
107	AIR TRANSPORT	24.1	18.8	85.4	27.1	9.3	75.9
108	SERVICES INCIDENTAL TO TRANSPORT	9.3	85.4	79.2	91.7	57.4	79.6
109	STORAGE AND WAREHOUSING	46.3	52.1	79.2	91.7	70.4	38.9
110	COMMUNICATION	87.0	14.6	60.4	14.6	64.8	53.7
111	PRIVATE EDUCATIONAL SERVICES	79.6	47.9	10.4	18.8	38.9	61.1
112	PRIVATE MEDICAL SERVICES	90.7	43.8	52.1	43.8	31.5	42.6
113	PROFESSIONAL SERVICES	72.2	68.8	43.8	77.1	70.4	50.0
114	ADVERTISING SERVICES	83.3	72.9	43.8	77.1	87.0	27.8
115	OTHER BUSINESS SERVICES, N.E.C.	68.5	93.8	43.8	77.1	42.6	98.1
116	RECREATIONAL SERVICES	35.2	39.6	56.3	39.6	35.2	46.3
117	DRINKING AND EATING PLACES	20.4	97.9	4.2	50.0	50.0	68.5
118	HOTELS AND OTHER LODGING PLACES	31.5	31.3	4.2	50.0	27.8	90.7
119	PERSONAL SERVICES	98.1	89.6	35.4	85.4	75.9	31.5

ANNEX TABLE 6. (CONT.)

I-C CODE	SECTOR/ INDUSTRY	DOMESTIC DEMAND	FORWARD LINKAGES	BACKWARD LINKAGES
93	SCRAP	70.4	5.6	94.4
94	ELECTRICITY	57.4	53.7	87.0
95	GAS	20.4	53.7	87.0
96	WATER	46.3	53.7	87.0
97	CONSTRUCTION	61.1	9.3	98.1
98	WHOLESALE TRADE	5.6	96.3	11.1
99	RETAIL TRADE	70.4	96.3	11.1
100	BANKING	70.4	14.8	18.5
101	NON-BANKING FINANCIAL INSTITUTIONS	70.4	14.8	18.5
102	LIFE AND NON-LIFE INSURANCE	94.4	24.1	5.6
103	REAL ESTATE	16.7	27.8	24.1
104	RAILROAD TRANSPORT	9.3	38.9	72.2
105	OTHER LAND TRANSPORT	24.1	38.9	72.2
106	WATER TRANSPORT	1.9	38.9	72.2
107	AIR TRANSPORT	79.6	38.9	72.2
108	SERVICES INCIDENTAL TO TRANSPORT	13.0	38.9	72.2
109	STORAGE AND WAREHOUSING	90.7	1.9	1.9
110	COMMUNICATION	38.9	20.4	27.8
111	PRIVATE EDUCATIONAL SERVICES	98.1	75.9	46.3
112	PRIVATE MEDICAL SERVICES	87.0	75.9	46.3
113	PROFESSIONAL SERVICES	53.7	75.9	46.3
114	ADVERTISING SERVICES	83.3	75.9	46.3
115	OTHER BUSINESS SERVICES, N.E.C.	27.8	75.9	46.3
116	RECREATIONAL SERVICES	42.6	75.9	46.3
117	DRINKING AND EATING PLACES	35.2	75.9	46.3
118	HOTELS AND OTHER LODGING PLACES	31.5	75.9	46.3
119	PERSONAL SERVICES	50.0	75.9	46.3

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