ABLE 6: Employment effects of export expansion in manufactures over 10 years, base year 1965

I-O Sector No.	Name of Sector	EXPORT GROWTH: Two-fold increase (7.2 per cent annually)	Five-fold increase (16.6 per cent annually)	Ten-fold increase (25.9 per cent annually)
15	Processed fruits and vegetables	1,561	6,244	14,049
17	Grain mill products	47	188	423
19	Sugar and confectioneries	4,152	16,608	37,368
20	Other food products	153	612	1,377
22	Brewery and malt products	17	68	153
24	Tobacco products	37	148	333
25	Knitting and textile mill products	224	896	2,016
26	Cordage and other native textiles	252	1,008	2,268
28	Footwear	13	52	117
29	Made-up textile products	11,385	45,540	102,465
30	Lumber	785	3,140	7,065
31	Plywood and veneer	8,118	32,472	73,062
32	Wood furniture	156	624	1,404
35	Other wood products	443	1,772	3,404
42	Paints and related compounds	17	68	153
43	Medical and Pharmaceutical products	60	240	540
44	Washing and cleaning compounds	11	44	99
45	Desiccated and other coconut products	13,381	53,524	120,429
48	Petroleum refinery products	2	8	18
58	Other metal products	56	224	504
70	Professional, scientific equipment & parts	173	692	1,557
71	Other manufactured products	3	12	27
	All Industries	41,046	164,184	369,414

The total amount of employment creation can hardly be considered impressive, especially in the context of the severe employment problem in the Philippines.[17] Thus, a two-fold increase in exports over ten years could generate an additional 41 thousand employment opportunities, representing only about 6 per cent of the 663 thousand openly unemployed workers in 1965 (or 4.5 per cent of that in 1967). Total manufacturing employment in 1965 has been estimated by the BCSSH October survey at 1,101 thousand; hence an annual growth rate of 7.2 per cent in manufactured exports would lead to an increase in employment of only 3.7 per cent over ten years.

One does not get much consolation in considering the higher rates of export growth specified. From Table 6 sustained proportional expansion in manufactured exports of 16.6 and 25.9 per cent per annum over ten years is seen to imply total employment gains of only 164 and 369 thousand, respectively. This means that such high rates of export growth would generate average annual rates of increase in manufacturing employment of only 1.49 and 3.35 per cent, respectively.

The results of the above exercise provide cause for pessimism on the medium-term possibilities for substantial employment generation from export expansion in manufactured products given the prevailing export structure.[18] Unless

accompanied by (a) significant compositional shift toward export commodities with high labor content and (b) widespread adoption of more labor-intensive techniques in the export-oriented industries, it appears unreasonable to expect that the current severity of the employment problem in the Philippines would be alleviated appreciably in the near future by the employment-generating effects of even the highest of feasible rates of increase in manufactured exports.[19]

VI

Like most other LDCs, the Philippines has had to rely heavily on primary product exports in the past in meeting foreign exchange requirements. By sheer size of the current share in total exports, agriculturally-based exports will continue to dominate for a good many years. The period 1954-1969 has already witnessed a decreasing trend in the volume of agricultural exports, attributable in large measure to the relative neglect of postwar economic policy to actively promote exports in general and to the declining opportunities in the United States market due to the diminishing preferential treatment of the principal agricultural exports since 1956.[20] With manufactured exports not taking up the slack, the overall growth of exports has suffered. The consequence on employment generation has been unfortunate, especially in view of the

relatively poor export performance of the labor-intensive industries.

In a long-term perspective the manufacturing industries would seem to offer the greatest scope for employment generation from export expansion. However, one could infer from the calculations of the preceding section that it will take some time before a significant employment pay-off can be realized from even a very rapid expansion of manufactured exports. This is due in part to the very small base of manufactured exports at the present time, in part to the strong bias of the current export structure toward the less labor-intensive products and in part to the widespread adoption of capital-intensive production techniques in Philippine manufacturing.

Three kinds of policy actions may be taken to maximize the employment gains from the growth of manufactured exports. One relates to the ① improvement of the economic climate for exports in general by removing well-known biases against exporting. The second would consist of ② selective subsidization of manufactured export commodities that meet certain criteria, e.g., high employment content, strong linkages in production to other industries, new export commodities, penetration of a new export market, etc. And third would be the ③ promotion of labor-using techniques of production in the export-oriented manufacturing industries.

It seems clear that the first two may have a bearing on the third in that the economic incentives (general or selective) provided to exporters could take the form of inducements for them to utilize more labor-intensive production methods. Thus a currency devaluation benefits exporters across-the-board (by raising their peso earnings) but at the same time makes imported capital equipment and machinery more expensive, the latter having the effect of encouraging a shift to more labor-using techniques of production where possibilities for factor substitution exist. Similarly, special benefits conferred on particular export commodities can be made contingent on a high degree of labor use in their production.

These incentive measures are geared to improving the profitability of exports, which is a necessary condition for rapid expansion as shown by the recent export experience of South Korea and Taiwan. Important steps have been taken in the Philippines in recent years (if somewhat belatedly) in providing promotional incentives to exporters and it suffices here to enumerate some of them: [a] the de facto devaluation of the peso in early 1970, [b] tax exemption and other benefits accorded by the Board of Investments to firms registered in the Exportpriorities Plan, the [c] establishment of the Mariveles Export Processing Zone, and the [d] creation of an international trading company to serve as a central clearing house for bulk trading and financing.

What has not received much attention until very recently is the possibility of increasing the participation of small- and medium-scale producers as a means of promoting greater use of labor in the export-oriented manufacturing industries. Since small-scale manufacturing is inherently labor-intensive, the effect of its having a greater role in export production would be to raise the labor-absorptive capacity of the export industries. There is need to examine carefully the basis of the commonly used argument that only large-scale enterprises can succeed in producing for the export market. This may be true in the particular activities of export promotion and sale, but not in the actual production of the commodities, particularly in industries not characterized by significant economies of scale.

In some countries, e.g., South Korea and Taiwan, a substantial part of total manufactured exports is contributed by small- and medium-scale industries. Such exposure to international competition should explain why there is a well-developed small-scale manufacturing sector in these countries with a great diversity of products, skills, techniques and processes. In South Korea, where about one half of total manufactured exports are accounted for by small-scale producers, "the major objective of small industries development policies . . . is to stimulate their export business" (Yu, 1970; p. 26).

Garments (made-up textile products), wood furnitures other wood products and footwear are some promising areas for greater direct participation of the small and medium-sized firms in export production at this time. A large and closely coordinated network of small-scale producers with institutional support for export promotion and sale would be one of many pre-conditions to a successful performance in the international market. At least as equally important is the improvement in quality standards for the exportable products of small-scale manufacturing. New avenues of product design need to be explored also to enhance the marketability of their products in the export field. Finally, to be viable at all in export production, labor productivity in these industries has to rise from the very low levels that have been observed in the past (Bautista, 1973). All these would require greater effectiveness of the various forms of institutional assistance to small-scale industry, viz., advisory services, skill training, access to credit facilities, marketing assistance, and the generation and diffusion of "appropriate" technology.

The indirect participation of small producers in export production should also be promoted by strengthening intra-industry links with large-scale firms with a view to lowering the overall capital requirements of manufactured exports. The existence of technological dualism in many industries could be exploited by encouraging a symbiotic relationship between the

small and the larger-sized establishments through subcontracting. Most industrial exports of the big companies in Japan, for example, have components, parts and accessories produced by the low wage labor in small- and medium-scale enterprises (Watanabe, 1971).

In conclusion, about eighty per cent of manufacturing laborers in the Philippines are working at varying levels of underemployment in the small-scale subsector consisting of establishments with less than 20 workers and manufacturing activities in cottage industries (Bautista, 1973). Unless its vast potential for employment generation is tapped by linking it directly or indirectly with the export-producing sectors, there is reason to be skeptical about substantial employment benefits to be derived in the near future from even the most optimistic projection of export expansion in manufactured goods. The only other means of effecting a significant reduction in the overall capital intensiveness of manufactured exports would be the widespread shift to labor-intensive production techniques by the large firms. This is very difficult to expect in view of the nature of imported technology and other well-known obstacles inherent with large-scale manufacturing.

NOTES

1. Two recent studies (Alban, 1972; Noriega, 1972) examine the direct employment content of Philippine exports at a disaggregative level for 1970 with a view to identifying particular export products that are labor-intensive (i.e., with relatively lower value added per worker). A very detailed study of the composition and growth of Philippine exports for 1961-1967 is done by Sicat (1969), but which has not dealt with the employment implications.

2. If the increase in exports represents only a shift from the other components of final demand (e.g., domestic consumption), there will be no additional employment attributable to the rise in exports since such shift has no effect on domestic production. We ignore this complication in the present study in view of the long period of time (1954-1969) that the growth of the Philippine exports will be examined.

3. The BCS Labor Force Survey for October 1965 reveals that only 63.6 per cent of workers employed in manufacturing are working full-time (40 hours a week).

4. Only about 16 per cent of laborers in agriculture, forestry and fishing received wages and salaries in 1971, based on BCS survey data.

5. The 1961 Economic Census gives the following information on manufacturing establishments employing 10 or more workers: total number of production and related workers = 200 thousand, total man hours worked by production and related workers = 526,886 thousand. On the basis of six working days a week, the implied average number of hours worked per day by each production worker is 8.42.

6. The source of input-output data used in this study is a monograph by Director Miñares (1971) of the Bureau of the Census and Statistics.

7. Obtained by premultiplying the column vector of wage coefficients representing the different industries by the transpose of the inverse matrix.

8. Representing the sum of products of sectoral direct wage coefficients and exports.

9. For South Korea in 1966, the ratio the direct and indirect input requirements to the value of manufactured exports is .285, computed from data given by Lim (1973 on the basis of a 24-industry classification of the manufacturing sector. This means that the interindustry linkage within South Korean manufacturing is more than 40 per cent stronger in comparison to that of the Philippines.

10. It would be interesting to examine closely this particular case of the "Leontief paradox" along the lines of approached surveyed by Baldwin (1971) for the United States, but the available data at this time make any such study infeasible. A strong case can probably be made for the dominant role of the effective protection structure in explaining the commodity composition of Philippine foreign trade.

11. These growth rate values are given by Balassa (1971).

12. Based on the 1965 money wage rate of common laborers in industrial establishments in Metropolitan Manila, as reported in the Statistical Bulletin of the Central Bank.

13. Value of output in current prices, average wage earnings and total employment are available for the period 1956-1969 (except in the Census years 1961 and 1967) from the Annual Survey of Manufactures. The price deflator used in converting average wage and value of sectoral output to 1957 prices is taken from Williamson and Sicat (1968), which is based on wholesale prices of domestically produced manufactured goods as compiled by the Central Bank.

14. It is interesting to see how the estimates of the incremental employment-output ratio for the export-producing manufacturing industires correlate with the sectoral wage coefficient values as presented earlier. The correlation coefficient between these two measures of sectoral labor intensity comes out to be 0.20, which is not significant at even the 10 per cent level ($t = 0.91$). Such insignificant correlation may be explained by the fact that the estimates of the incremental employment-output ratio are based on data for the large establishments only, while those of the wage coefficient cover all contributors to sectoral output. If this is the major explanation, it would be reasonable to hypothesize that the degree of dominance by the large firms varies among the 22 manufacturing industries considered. Of course, differences in the underlying concepts and in sources of data used could also account in part for their non-correlation.

15. The above findings would seem to indicate that there are significant differences among the large establishments in the different manufacturing industries in the sensitivity of labor demand to real wage changes, and support neither the macro-results of zero wage elasticity of manufacturing employment (Encarnacion, et al., 1972) nor the statement that the rise in real wages of about 1 per cent annually over the period 1960-1966 "must have had a serious impact on employment growth" for manufacturing as a whole (Williamson, 1971).

16. Since sectoral output as an explanatory variable in the regression is expressed in 1957 prices, sectoral export values in the base year 1965 have to be converted first to 1957 prices. The source of data on the sectoral price indices for 1957 and 1965 is Williamson and Sicat (1968).

17. The employment estimates presented in Table 6 are even on the high side, considering that a technical progress term is not included in the regression. Under the assumption that the temporal effect of technical change is to raise labor productivity, its non-inclusion gives an upward bias to the estimates of the marginal labor coefficient given earlier.

18. Central Bank export statistics by commodity group do not reveal much difference in the composition of exports in 1965 (the base year of the above calculations) and 1972.

19. Taking into account the indirect employment effects of an increase in export production in manufactures through interindustry linkages should not affect the conclusion emerging from the above exercise. The manufactured export multiplier has been computed earlier to be about 1.01, as derived from 1965 input-output data. Thus the direct and indirect employment effects of export expansion would be slightly more than double the estimates given above-even so, they are still low. Moreover, the magnitude of such employment effects overstates the medium-term repercussions since the indirect effects (second-round, third-round, etc.) will work themselves out only when equilibrium in interindustry relations is reached.

20. The Revised U.S.-Philippine Trade Agreement of 1955, better known as the Laurel-Langley Agreement, stipulates progressive increases in the proportion of the U.S. tariff rates to be paid by Filipino exporters together with annual quotas on most of the agriculturally-based export commodities.

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