

Growth and Structural Change in Pakistan's Manufacturing Industry: A Comment

by

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The Lewis and Soligo article [1] includes an estimate of the growth of all "large scale" industry followed by an analysis of the growth rates of the major industry groups: consumer goods, intermediate products, investment and related goods. These two parts of the article are not dependent on each other and the very interesting and excellent analysis of the differential growth rates of the sub-sectors would not be affected by bias in the overall growth estimates. Some questions can be raised about both parts of the article.

Estimates of value added and rate of growth of large scale industry are of considerable importance to analyses of the Pakistan economy. Lewis and Soligo's estimate of the level of value added and its rate of growth is considerably higher than those of the Census of Manufacturing Industry (CMI), the National Accounts, and my own [2].

There are a number of plausible explanations for these differences in level and rates of growth.

1. The Lewis and Soligo estimates are based on both the CMI and tax returns. The higher rate of growth in their figure may be due to an upward bias stemming from improved coverage. There seems to be no doubt that the CMI coverage of registered factories has consistently improved. The 1954-55 census, which provides the baseline for Lewis and Soligo, had very poor coverage and has been largely discarded by the Central Statistical Office (CSO) for that reason. Coverage was substantially improved in 1959-60. Evasion of excises and sales taxes was widespread in 1954-55. In 1959-60, or shortly after the imposition of martial law, collection almost certainly improved. Since some Lewis and Soligo estimates of value added are based on government receipts from excises and sales taxes, their estimate of the rate of growth would have a substantial upward bias if such an improvement in collection took place, which would be added to the upward bias due to the improved coverage of the CMI. Some indirect support is provided for this hypothesis by the fact that the difference in growth rates between Lewis and Soligo and other estimates is particularly

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great between 1954-55 and 1959-60, a period during which both upward biases were most pronounced.

2. The higher level of the Lewis and Soligo estimates can be explained in part by their derivation. They assume that value added in the same proportion of total output as shown by the CMI. I have suggested [2] that the CMI overestimates value added, because it does not subtract payments by industrial firms for various services (such as maintenance and repair charges, advertising, legal fees, accounting fees, office expenses, selling costs, and some transport charges). According to my survey those minor miscellaneous expenses amounted to about 7 per cent of total value added.

3. There is another explanation for the higher level of the Lewis and Soligo estimates. Some of their estimates are based on excise and sales tax collection. In some industries (*e.g.*, salt) these taxes are collected from small firms which do not fall into the census definition of "large scale industry". Lewis and Soligo may have been unable to exclude all such small firms from their estimates. This naturally produces a higher estimate of value added.

The overall rate of industrial growth and the total value added by large scale manufacturing are not essential data for the Lewis and Soligo article. Any upward bias in level or rate, particularly of the relatively minor magnitude under discussion, does not affect their analysis or conclusions. If, however, there is an upward bias in their estimates, especially for the 1954/55 to 1959/60 period, it would be best not to use their overall estimates for other analyses where this bias would be of major importance.

One weakness of their data might, however, have some significance for their analysis and conclusions: their inability to use constant prices. It should be well understood that this is not due to any failure on their part. It would be almost impossible to calculate constant prices by industry over the period under examination. The price data to construct indices by industry or by industry group do not seem to be available.

However, one can find some information on the prices of commodities with considerable weight in the value added of all three commodity groups (*see*, Table I). Inspection of these data, admittedly without any weighting procedure, suggests that:

- 1) Consumer goods prices were highest in 1954/55, changed little from then to 1959/60 and declined significantly to 1963/64, as seven price indices declined and only two rose.

TABLE I

PRICES OF SOME IMPORTANT MANUFACTURES
(1954/55 & 1959/60 in rupees; 1959/60 & 1963/64 index numbers)

	1954/55	1959/60	1963/64
Consumer Goods			
Vanaspati	7.7	8.1	
Vegetable ghee - EP & WP		100	77 & 95
Matches	7.2	6.2	
Matches - EP & WP		100	98 & 100
Soap	5.9	5.7	
Soap - EP & WP		100	95 & 85
Cloth	48.1	48.4	
Cotton manufactures		100	95.5
Cigarettes	11 & 31	11 & 26	
Tobacco products - EP & WP		100	116 & 128
Artsilk - WP		100	83
Intermediate Products			
Soda ash	18.6	21.4	
General chemicals - EP & WP		100	93 & 105
Congo red	4.9	6.6	
Dyeing materials - EP & WP		100	107 & 123
Jute manufacture		100	98
Printing paper	0.73	0.95	
Paper & newsprint - EP & WP		100	115 & 117
Investment and Related Goods			
Cement	78.1	83.1 to 93.3	
Cement - WP		100	114
M.S. bars	575	770	
Metal products - EP & WP		100	139 & 113
Machinery - EP & WP		100	101 & 100
Cycles - EP & WP		100	111 & 108
Electric goods EP & WP		100	111 & 111

EP=East Pakistan
WP=West Pakistan

Sources: 1954/55 and 1959/60 rupee prices from [3].
Index numbers from [4].

- 2) Intermediate goods prices generally rose between 1954/55 and 1959/60 and between that date and 1963/64 as five indices rose and only two declined.
- 3) The two figures available (one for cement and one for metal products) indicate that investment goods prices rose sharply to 1959/60. All indices for this category also rose, some considerably, to 1963/64.

If these scattered price data are at all representative one would need to modify somewhat the conclusions in the Lewis-Soligo article. That is, if consumer goods prices declined, while prices of intermediate goods rose somewhat, and prices of capital goods rose considerably, the use of current price data would *understate* the rate of growth in consumer goods and the degree of import substitution in these goods, while *overstating* both the rate of growth and the degree of import substitution for capital goods.

The trends in the rate of growth of the three industry groups seem to be too pronounced for the Lewis-Soligo conclusions to be affected by the rather modest price correction suggested here. But it does seem likely that the contribution of consumer goods industries to value added and import substitution have been somewhat underestimated, those of the investment and related goods industries and perhaps intermediate goods industries somewhat overestimated.

REFERENCES

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