

Allocation of Investment in India

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The problem of investment criteria in underdeveloped areas has been the subject of great attention during the past decade. The basic question is this: Given the limited quantity of saving or investment funds available, how should these funds be allocated? Economists have given increasingly complex answers to this question, with the range of suggested criteria including the capital-labor ratio,¹ the capital-output ratio,² the social marginal product,³ the marginal per capita reinvestment quotient,⁴ and the marginal growth contribution.⁵ Among these, the criterion which continues to enjoy the greatest prestige among noneconomists, and many economists as well, is the capital-labor ratio. It is part of the "conventional wisdom" (to borrow J. K. Galbraith's phrase⁶) that labor-intensive investments are the most efficient, particularly for overpopulated, underdeveloped countries.

It is the purpose of this paper to point out the weaknesses of the labor-intensive criterion, to present certain alternative criteria, and to show how the latter better explain the investment allocation in India—an overpopulated country par excellence. Before proceeding with this critique, however, it is essential to present the case for labor-intensity.

It is tempting to believe that the allocation of investment is a relatively simple matter, at least at the theoretical level: projects should be selected which will result in a maximum rate of economic growth. But what does this mean?

First: Is the goal to maximize national income or per capita income? If the latter, the population impact of an investment, as well as its impact on output, must be considered.

Second: Is the goal to maximize output in the immediate future, or is it the ultimate level of output (or its rate of growth) in the distant future which is our concern? In the former case, short-lived, high-output investments might be best; in the latter case, the most durable capital equipment might be most suitable.

Third: Is the achievement and maintenance of full employment a proper goal of economic growth? If output is our sole concern, then modern, labor-saving devices might be the most desirable methods in which to invest. But if unemployment accentuates the economic injustice of income inequality and leads to social and political instability, then all economic growth might cease. In this case, the employment aspects of investment assume major importance.

The phrasing of these three questions suggests that the alternative goals are necessarily in conflict: the satisfaction of one, maximizing output, for example, seems to preclude the satisfaction of another, such as full employment. This need not be the case, however, as the labor-intensive hypothesis holds out the possibility that all of these goals might be attained simultaneously.

The labor-intensive hypothesis may be stated as follows:* In countries where labor is plentiful and cheap, and capital is scarce and expensive, the most efficient method of production, i.e., that one which will maximize output from the given resources available, will be relatively labor-intensive. The figures in Table I will

TABLE I.

	COUNTRY A: CAPITAL STOCK: \$10	
	POPULATION (LABOR FORCE) 10 MEN	
	Technique 1 Capital-intensive	Technique 2 Labor-intensive
1. Capital-labor ratio	\$10/1	\$10/10 or \$1/1
2. Total output	\$5.00	\$10.00
3. Output per capita	\$.50	\$ 1.00
4. Output per worker employed	\$5.00	\$ 1.00

*In this initial presentation of the labor-intensive criterion, the case for it will be made as clear and strong as possible. The weaknesses of the criterion will be discussed in later sections of the paper.

be used to illustrate this point. Country A has a capital stock of ten dollars, and a population and labor force of ten men. It is assumed that two of the alternative techniques available to Country A are Technique 1, which is capital-intensive (the capital-labor ratio is \$10/1), and Technique 2, which is labor-intensive (the capital-labor ratio is \$10/10, or \$1/1). It is further assumed that if the entire capital stock is employed in Technique 1, the total output will be five dollars, and if the capital stock is employed in Technique 2, the total output will be ten dollars. This relationship between the outputs of the two techniques is based on the economic principle of diminishing returns or variable proportions. That is, as additional units of labor are employed with a given amount of capital, total output increases, but at a diminishing rate. Thus, when ten men are employed with the capital stock, the capital is being used more intensively so that greater output results than when one man is employed, but the increase in output is not tenfold. Given the population, per capita output (income) will be the highest when the total output is greatest, as shown in Line 3 of Table I. With Technique 2, per capita income is one dollar, whereas with Technique 1, it is only fifty cents.

An unfortunate confusion has arisen between maximizing output *per capita* and output *per worker employed*. It is sometimes argued that since improving the productivity of the labor force, by having better methods and more capital for laborers to work with, is at the heart of economic growth, the best technique to employ is that one which maximizes the output of the individual worker employed.⁷ That this is not the case is clearly shown in Table I. Technique 1 combines ten dollars capital with only one worker, so that his output is high, five dollars (Line 4). The output of the rest of the labor force, however, is zero because they are unemployed. When the ten dollars capital is combined with ten workers, the output per worker is only one dollar (because each worker has less capital to work with), but the total output is ten dollars, and thus per capita output (income) is higher.

On the basis of the principle of diminishing returns, therefore, relatively labor-intensive methods of production will yield the maximum output in the overpopulated, capital-scarce countries.

What will be the impact of labor-intensive investments on population growth? No clear-cut answer can be given, but a plausible argument can be made along the following lines. Since increasing the death rate as a method of population control does not seem to command widespread support,⁸ it is necessary to examine the impact of labor-intensive investment on the birth rate. One widely accepted population growth theory is that rising living standards are accompanied by changes away from the social and economic values which encourage large families. If this is the case, then there may be little or no conflict between maximizing national income and maximizing per capita income.⁹ If labor-intensive investments accomplish the former, then they will also achieve maximum per capita income.

The problem of short- versus long-lived investment has been developing a literature of its own during the past five years.¹⁰ The greatest insight to be gained from this literature is that the short-lived, high-"payoff" investment may well lead to a higher ultimate growth rate, when saving (and reinvestment) from the initial return is accounted for. That is, the early, high output permits early and substantial reinvestment, which may cause a more rapid rate of capital accumulation. The three factors determining whether or not this will result are: how much higher the initial output is, how much earlier this output becomes available, and whether the saving and reinvestment ratio is adversely affected by the short-lived method of production. Labor-intensive investments would generally be the short-lived ones, whereas the labor-saving techniques would involve more durable, capital-intensive investment. If the labor-intensive short-lived investments, with the high initial output, also result in the highest ultimate rate of economic growth, then again there is no conflict between the alternative goals suggested above.

The final goal of employment requires no discussion. It is obvious (other things being equal) that labor-intensive methods will employ more labor than capital-intensive investments.

In summation, the labor-intensive hypothesis has been presented as a "rule of thumb" investment guide, which results in maximum output in the immediate future, which may also bring about the highest ultimate rate of growth, which unifies the potentially conflicting goals of output and employment, and offers

the possibility at least of having side effects favorable to a lower birth rate. Several other advantages have been attributed to this type of investment which make it particularly appealing to political scientists and sociologists. Labor-intensive usually means small-scale investment, which permits the decentralization of economic power, and consequently a broader-based and more equally distributed political power. Further, small-scale industries can be geographically decentralized, which will minimize or eliminate urban industrial slums.

If there is one country to which the labor-intensive hypothesis should apply, it is India. At this point, therefore, before discussing the theoretical weaknesses of this hypothesis, it will be enlightening to examine the allocation of investment funds during the Indian First Five Year Plan. The main features are presented in Table II. The total investment in manufacturing, including

TABLE II.
ALLOCATION OF GROSS INVESTMENT IN INDIA, 1951-56

Sector	Capital-intensive		Labor-intensive		Total Investment (Rs. Billion)
	(Rs. Billion)	%	(Rs. Billion)	%	
Manufacturing	2.6	21	9.5	79	12.1
Social Overhead	28.2	94	1.7	6	29.9
Agriculture	2.7	17	13.1	83	15.8
Social Services	1.7	100	1.7
TOTALS	33.5	56%	26.0	44%	59.5

The figures in this table are based on material in the following sources: (1) W. Malenbaum, "India and China: Contrasts in Development Performance," *American Economic Review*, Vol. XLIX, No. 3 (June, 1959), p. 300. (2) W. Malenbaum, *East and West in India's Development* (Washington: National Planning Association, 1959), p. 28. (3) V. V. Bhatt, "Savings and Capital Formation," *Economic Development and Cultural Change*, Vol. VII, No. 3, Part I (April, 1959), pp. 320-332. (4) Twelve reports of the Government of India, the most important being one by The Planning Commission, *Review of the First Five Year Plan* (Delhi, 1957).

the handicraft cottage industries, was Rs. 12.1 billion for the five-year period. Of this Rs. 2.6 billion, or 21%, was invested in very capital-intensive industries (having a capital-labor ratio of Rs. 11,000 per worker, or above), most of which were capital goods industries, such as steel, automobiles, and cement. Rs. 9.5 billion, 79%, was invested in relatively labor-intensive industries (with a capital-labor ratio of Rs. 6,000 per worker, or below), most of which were consumer-goods industries, such as cotton textiles, jute, and sugar. Perhaps even more significant than the substan-

tial emphasis on the capital-intensive industries is the fact that within the labor-intensive industries, investment was often not in the more labor-intensive, hand methods of production, but in the relatively labor-saving, capital-intensive techniques. In jute, for example, the gross investment was Rs. 150 million, primarily for replacement and modernization. This investment was highly labor-saving as is indicated by a 10% drop in employment during the plan period, when output increased 28%.¹¹ Throughout the First Five Year Plan, the managers of cotton textile mills wanted to introduce automatic looms. Only 8,300 were imported, but more would have been obtained, had not government restrictions and an ultimate ban been imposed.¹² (This ban was to prevent unemployment of the handloom workers.)

In the social overhead industries of power, transport, communications, and housing, total investment was Rs. 29.9 billion. Although capital-labor ratios are not available, qualitative information indicates that 88% was relatively capital-intensive investment in power, telegraph and telephone centers and lines, railways, shipping, ports and harbors, civil air transport, and housing. The remaining 12% was in roads (Rs. 1.5 billion) and in private transport (Rs. 2 billion). Roads can be built by relatively labor-intensive methods, but they may be a capital-intensive method of providing transportation. If unsurfaced roads, requiring labor-intensive maintenance, are built instead of durable, surfaced roads, then the provision of road service would be relatively labor-intensive. Adequate figures are not available, but it may be estimated that about half of the road expenditure was for unsurfaced roads of this kind. Assuming that about half of the private transport investment was in labor-intensive methods, the breakdown of social overhead investments is as follows: 94% capital-intensive; 6% labor-intensive.

The total investment in agriculture was Rs. 15.8 billion. Rs. 1.8 billion (about 11%) was spent for a miscellany of agricultural programs, including land reclamation, fertilizers, and community development. There is a similarity here to the consumer goods investment, in that these agriculture programs may be considered labor-intensive in relation to the capital goods industries, but within many of these programs the labor-intensive methods were stressed less than the more capital-intensive techniques: tractors

for land reclamation; chemical fertilizers, instead of urban and rural composts; power fishing vessels, etc. The capital-intensity of irrigation parallels that of roads: if irrigation is by bunds, embankments, canals, channels, and wells, more labor-intensive maintenance is required, and thus these are more labor-intensive methods of irrigation than that provided by durable installations, such as modern high dams. If the labor-intensive "rule of thumb" had been followed, the major irrigation expenditure would have been in the small-scale operations. Of the Rs. 4.1 billion spent on irrigation, only Rs. 1.4 billion was for the small-scale, and Rs. 2.7 billion for the capital-intensive methods. Rs. 10 billion of private investment in agriculture is assumed to be labor-intensive. Consequently, for agriculture as a whole, 83% of the investment was labor-intensive, 17% capital-intensive.

The remainder of the expenditure under the First Five Year Plan was Rs. 1.7 billion for relatively labor-intensive social services and miscellaneous items. Of the total capital expenditures during the Five Year Plan, 56% was in relatively capital-intensive investments. The remaining 44%, while in relatively labor-intensive industries, was often not invested in the *most* labor-intensive techniques available.*

It is possible to react to these findings in two ways: one can hold to the labor-intensive hypothesis, and ask why Indian investment was misallocated; or one can discard the hypothesis, and seek a more meaningful alternative. In spite of the great appeal of the labor-intensive "rule," most economists have followed the latter course. The "rule" has been attacked on two grounds: first, it produces grossly misleading advice as to the allocation of investment *among industries*; and second, concerning the *choice of technique within an industry*, its guidance is at best confusing, and quite often incorrect. The remainder of this paper will analyze, in order, these two criticisms.

A fundamental error in the labor-intensive hypothesis can

*This conclusion is supported by an intensive study of five Indian industries by G. Rosen in *Industrial Change in India* (Glencoe, Ill.: The Free Press, 1958). His results indicate "a trend toward rising capital-labor coefficients in the Second Plan which lends support to the conclusion, presented in the previous two chapters, of rising capital-output ratios. The upward trends of both relationships clearly indicate a gradual introduction of labor-saving equipment" (p. 143).

best be brought to light by the following question: In a completely closed economy, with no international trade, should investment be made only in those industries which are most labor-intensive? Without international trade, consumption is necessarily limited to those goods that are produced domestically, and there may exist consumer demands for goods which have only capital-intensive production methods.

If rice can be produced more labor-intensively than cloth, does this mean that all investment should go into rice and none into cloth? If economic growth is to be in any way related to rising living standards and consumer welfare, then the composition of output must be closely related to the pattern of goods that consumers want. Thus, if consumers demand more rice and more cloth, investment should be allocated to the production of both goods regardless of their capital-labor ratios.* An extreme case, which may point up the criticism more clearly, is this: If consumers demand electricity or want any good or service requiring electricity, then some of the limited investment funds should be allocated to a power industry, even though the capital-labor ratio may be very high.

During the past decade, several alternative theories have been formulated to deal with this problem of the allocation of investment funds among industries. The most comprehensive has come to be known as the principle of "balanced growth."¹³ The basic notion is a simple one: Investment should be so allocated that the resultant increase in output of each of the various goods coincides with the increased demand for these goods. The fundamental division between investment in consumer goods industries and capital goods industries is determined by the proportion of income which is consumed and saved. Within the consumer goods

*This is not to say that the capital-labor ratios do not have some effect on the quantity of the two goods which consumers will demand. If capital is expensive and labor is cheap, then the labor-intensive good will have a lower price; the quantity demanded will be greater, and thus the investment required in this industry may be greater. The capital-intensive good will be more expensive, but if at this higher price consumers still demand some quantity, then some investment should be allocated to the production of this good. In a free market economy, the profit motive operating through the price system would tend to bring about the proper investment allocation between the two goods.

sector, investment allocation is determined by the proportions in which goods are demanded. A properly working price system, operating in a relatively free market, will approximate the conditions of balanced growth. But lack of the appropriate institutional arrangements for a free market in most underdeveloped areas may result in the necessity of government planning to bring about the balanced growth of output that is desirable.

The balanced growth principle, however, implies that investment should proceed simultaneously on all fronts; that is, all industries are equally important. It ignores or denies the existence of certain priority industries which have a key role to play in economic development. It may not properly take account of "external economies" which accompany certain types of investments. An investment in a multipurpose dam project, for example, may not be profitable in terms of the revenue it receives from marketing its services, but it may have many indirect social benefits in terms of flood control, river navigation, and the growth of industries based on the water or power supply. The sum of the direct and indirect benefits is the important measure by which investments should be compared and the appropriate ones selected. But whereas economists can define this sum conceptually, and they have a name for it (social marginal product), they find it almost impossible, when confronted with the development problem in a given country, to present a comprehensive list of investments which require priority because they have the highest social marginal product.¹⁴

The reason for this difficulty is quite obvious. The more indirect and abstract the benefits are, the harder it is to discover and quantify them for comparison purposes. The value of an investment in steel may be quite direct and measurable, but can the same be said of education expenditure? Education that increases human skills and productivity is a rather direct investment, although even this presents valuation and measurement problems. But what about the role of education in creating new attitudes and ways of thinking which encourage economic growth? What of the importance of education in bringing about institutional changes, which break with tradition, instill new aspirations, and facilitate the acceptance of innovations and change? The benefits of education may greatly surpass those of the steel mill, but the

former are intangible, the latter tangible and easily comprehended.

A partial solution to this dilemma is that these priority investments (or "growing points," as Kindleberger calls them)¹⁵ can be selected by skilled individuals on the basis of qualitative information. For example, there is substantial agreement among experts that underdeveloped areas should stress social overhead investments.¹⁶ In light of this consensus, the allocation of Indian investment (Table II) appears to be quite good: almost 50% of the investment was in this category. (When housing is deducted, however, the allocation appears in a less favorable light: one-fifth of the total investment, about Rs. 12 billion, was in the social overheads of transport, communication, and power.)

Unfortunately, experts do not always agree, as is evident from the vigorous debate over the Indian Second Five Year Plan. The First Plan stressed overheads and agriculture. Although the Second Plan has allocated more spending to all categories, there has been a significant increase in emphasis on manufacturing industry. This increase in planned expenditure on manufacturing was divided as follows: heavy machinery and steel in the capital goods sector, and very labor-intensive cottage industries in the consumer goods sector. Indian officials believe that unemployment is "the most pressing" economic problem,¹⁷ and cottage handicraft industries are one solution. The heavy industry investment is a reflection of the Planning Commission's position that this industry is a key "growing point"; with this emphasis the Indians are moving somewhat toward the Chinese and Russian examples.

Disagreement exists with both aspects of the industrial program. The cottage industry expenditure is criticised on the grounds that the unemployed should be producing capital goods, not placed in make-work projects with inefficient techniques in the consumer goods sector.¹⁸ The stress on heavy capital goods has also been attacked. In an article reviewing the Second Plan, Ragnar Nurkse strongly criticises it, suggesting that the highest priority is still in transport, communications, power, and education. In particular, he believes that the Indian Plans have essentially overlooked the great contribution that education can make.¹⁹

What, then, is the conclusion concerning the allocation of investment among industries? The labor-intensive rule clearly is not appropriate. Balanced growth provides a useful general framework, which may serve as a guide for much of the investment (this was essentially the basis for the First and Second Five Year Plans), but it omits priorities. The social marginal product of each investment is the appropriate measure of its value and, consequently, is conceptually the best investment guide.* But this is a formal concept, which is difficult to use because precise measurement is impossible. Expert qualitative judgment is called for, but experts may disagree. There is no simple solution. Although the social marginal product appears to be the best, it is far from ideal.

The second criticism of the labor-intensive hypothesis is concerned with the choice of technique within an industry. The validity of the labor-intensive hypothesis depends on whether output will be highest when labor-intensive methods are employed. As noted above, the principle of diminishing returns was the fundamental rationale underlying the output conclusions reached. This principle also notes that "as additional laborers are added to a given quantity of capital, *eventually* a point is reached beyond which total output falls." Table III illustrates the point

TABLE III.

	COUNTRY A: CAPITAL STOCK: $\$10$		
	POPULATION (LABOR FORCE) 10 MEN		
	Technique 1	Technique 2	Technique 3
1. Capital-labor ratio	$\$10/1$	$\$10/10$ or $\$1/1$	$\$10/5$ or $\$2/1$
2. Total output	$\$5.00$	$\$10.00$	$\$15.00$
3. Output per capita	$\$.50$	$\$1.00$	$\$1.50$
4. Capital-output ratio	$\$2/1$	$\$1/1$	$\$.75/1$

*Galenson and Leibenstein, *op. cit.*, and Eckstein, *op. cit.*, have pointed out two weaknesses of the social marginal product (SMP) criterion: it does not reflect differing saving (and reinvestment) rates or differing population growth rates resulting from alternative investments. Thus the technique with the highest SMP may not produce the most valuable per capita consumption pattern. The marginal per capita reinvestment quotient and the marginal growth contribution (the two criteria suggested by these economists) are theoretically better than SMP, but would be even more difficult (if not impossible) to employ at the practical level. As a "rule of thumb" investment guide, SMP, though imperfect, is the best criterion.

I wish to make. Country A is now assumed to have three possible methods of production: Techniques 1 and 2 are the same as before, but now Technique 3 has been discovered which has a capital-labor ratio of \$2/1 (ten dollars of capital employs five men) and produces an output of fifteen dollars. Technique 3 is more capital-intensive than Technique 2; that is, the capital-labor ratio is \$2/1, instead of \$1/1, but it results in a higher total output and a higher output per capita of \$1.50 (Line 3). In other words, Technique 2 is inefficient. It is at this point that the labor-intensive hypothesis has received the most criticism, and justly so. The most labor-intensive method may be an inefficient one which results in a lower output, even though more labor has been applied to a given amount of capital. This, apparently, is the plight of many of the handicrafts in India. Technical innovations have occurred in the spinning of yarn, for example, which make hand spinning inefficient.

Because labor-intensive methods may be inefficient, some imprecision and confusion has occurred in the past; this can be avoided by utilizing the capital-output ratio as a measure of capital-intensity rather than the capital-labor ratio.²⁰ For example, Table III, Line 4, shows the capital-output ratios of the three techniques. Given the capital stock of ten dollars, the lowest capital-output ratio is that of Technique 3, .75. Technique 2 yields a lower output per unit of capital, so has a higher capital-output ratio of 1.0. If labor is plentiful (literally redundant) and capital is the only scarce factor of production, the appropriate investment "rule of thumb" is the "low-capital-output rule"; investment within an industry should be in those techniques with the lowest capital-output ratios.*

The selection of relatively capital-intensive techniques in India during the First Plan makes some sense in terms of the low capital-output rule, whereas it seems totally inappropriate when judged by the labor-intensive hypothesis. Within most capital goods industries, technical choices are limited; labor-intensive methods do not exist. If steel is to be produced (on social mar-

*Chenery, *op. cit.*, p. 87, has stated: "The turnover rate [capital-output ratio] is particularly useful in choosing among projects within a given sector." However, the low capital-output criterion has the same two weaknesses as SMP (noted above).

ginal product grounds), then even the technique that has the lowest capital-output ratio may be quite capital-intensive when compared with techniques in other industries. In the consumer goods industries, a range of alternative techniques exists, but apparently in many cases the most labor-intensive are inefficient (as is true of yarn spinning). In terms of the market this means that the handicraft workers are being driven out by the lower prices and superior quality of the products from small and large factories.

The simplicity and yet the generality of the labor-intensive hypothesis for investment allocation have made it very attractive to those concerned with economic growth in the underdeveloped, overpopulated countries of the world. This thesis has been examined in the light of the Indian experience from 1951-56, and has been found to be very weak; it is not adequate as a guide for the proper allocation of investment among industries or for the choice of techniques within an industry. The labor-intensive criterion should be discarded and greater emphasis placed on the alternative criteria, discussed above, which have theoretical validity and yield substantial insight into past experience.

NOTES

1. Many sources could be cited, but the following are typical: Government of India, *Second Five Year Plan* (Delhi, 1956), p. 25; and W. A. Lewis, *The Theory of Economic Growth* (Homewood, Ill.: Irwin, 1955), p. 137.
2. See, for example, N. S. Buchanan, *International Investment and Domestic Welfare* (New York, 1945), p. 24; and H. B. Chenery, "The Application of Investment Criteria," *Quarterly Journal of Economics*, Vol. LXVII, No. 1 (February, 1953), 87.
3. A. E. Kahn, "Investment Criteria in Development Programs," *Quarterly Journal of Economics*, Vol. LXV, No. 1 (February, 1951), 39.
4. W. Galenson and H. Leibenstein, "Investment Criteria, Productivity, and Economic Development," *Quarterly Journal of Economics*, Vol. LXIX, No. 3 (August, 1955), 351-352.
5. O. Eckstein, "Investment Criteria for Economic Development and the Theory of Intertemporal Welfare Economics," *Quarterly Journal of Economics*, Vol. LXXI, No. 1 (February, 1957), 69.
6. J. K. Galbraith, *The Affluent Society* (Boston: Houghton Mifflin, 1958), pp. 7-20.
7. H. J. Bruton, "Growth Models and Underdeveloped Economies," *Journal of Political Economy*, Vol. LXIII (August, 1955), 327.
8. However, Galenson and Leibenstein, *op. cit.*, seem to advocate an increase in the death rate, as was pointed out by J. Moes, "Investment Criteria,

- Productivity, and Economic Development: Comment," *Quarterly Journal of Economics*, Vol. LXXI, No. 1 (February, 1957), 163.
9. The impact on population resulting from a given investment allocation is a highly speculative and complicated matter. For alternative formulations of this problem, see Galenson and Leibenstein, *op. cit.*, and S. Enke. "Speculations on Population Growth and Economic Development," *Quarterly Journal of Economics*, Vol. LXXI, No. 1 (February, 1957), 19-35.
 10. A few of the articles pertaining to this issue are: E. Domar, "Depreciation, Replacement, and Growth," *Economic Journal*, Vol. LXIII (March, 1953), 1-32; Galenson and Leibenstein, *op. cit.*; P. S. Thomas, "Capital Intensity of Investment and the Economic Development of India," *Papers of the Michigan Academy of Science, Arts, and Letters*, Vol. XLIII (1958), 203-222; R. C. Blitz, "Capital Longevity and Economic Development," *The American Economic Review*, Vol. XLVIII, No. 3 (June, 1958), 313-329.
 11. Government of India, Planning Commission, *Programmes of Industrial Development* (Delhi, 1956), pp. 350-356.
 12. *Ibid.*, p. 338.
 13. There is a vast and growing literature on balanced growth. Perhaps the key source is R. Nurkse, *Problems of Capital Formation in Underdeveloped Countries* (Oxford, 1953).
 14. Chenery, *op. cit.*, has made an excellent attempt at such a ranking for Italy.
 15. C. P. Kindleberger, *Economic Development* (New York, 1958), p. 161.
 16. See Lewis, *op. cit.*, p. 265; R. Nurkse, "Reflections on India's Development Plan," *Quarterly Journal of Economics*, Vol. LXXI, No. 2 (May, 1957), 188-204; and Kindleberger, *op. cit.*, pp. 161, 167.
 17. Nurkse, "Reflections . . .," p. 188.
 18. C. N. Vakil and P. R. Brahmanand, *Planning for an Expanding Economy* (Bombay, 1956), pp. 248-249.
 19. Nurkse, "Reflections . . .," p. 199.
 20. For a more detailed discussion of the capital-output ratio, and some examples of the confusion surrounding the capital-labor ratio, see Thomas, *op. cit.*