Policy, Research, and External Affairs

WORKING PAPERS

Office of the Vice President

Development Economics
The World Bank
May 1990
WPS 439

WPS-439

Indicative Planning in Developing Countries

Bela Balassa

The lack of success of planning, together with the growing understanding of the importance of incentives and markets, have contributed to the decline of planning in the 1980s. The question remains, then, what should the role of the public sector in developing countries be?

The Policy, Research, and External Affairs Complex distributes PRE Working Papers to disseminate the findings of work in progress and to encourage the exchange of ideas among Bank staff and all others interested in development issues. These papers carry the names of the authors, reflect only their views, and should be used and cited accordingly. The findings, interpretations, and conclusions are the authors' own. They should not be attributed to the World Bank, its Board of Directors, its management, or any of its member countries.

Policy, Research, and External Affairs

WORKING PAPERS

Office of the Vice President

This paper — a product of the Office of the Vice President, Development Economics — is part of a larger effort in PRE to study development policies. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Norma Campbell, room S9-047, extension 33769 (23 pages).

Indicative planning involves the establishment of sectoral targets which are not compulsory for the private sector and are imbedded in macro-economic projections that pertain to a period of several years. Indicative planning has been widely practiced in developing countries during the postwar period. At the same time, the review of the experience of these countries indicates that it failed to have favorable economic effects while utilizing scarce administrative resources.

The lack of success of planning, together with the growing understanding of the importance of incentives and markets, have contributed to the decline of planning in the 1980s. The question remains, then, what should the role of the public sector in developing countries be? This question may be addressed by considering the choice between public and private enterprises in the manufacturing sector, the size of the government, the implications of public invest-

ments, and the evaluation of public sector projects.

Available evidence indicates the superiority of private enterprises over public enterprises. It further appears that increases in the size of the government adversely affect growth performance in developing countries. Finally, increases in the share of public investment tend to be associated with a decline in the share of total investment in GNP and with a fall in investment efficiency.

Nevertheless, there is evidence that infrastructural investments favorably affect private investment. At the same time, such investments should be subject to rigorous project evaluation so that appropriate choices may be made among alternative investments. They should also be based on multiannual programs. Thus, the usefulness of planning re-emerges in the confines of public sector investment in infrastructure.

The PRE Working Paper Series disseminates the findings of work under way in the Bank's Policy, Research, and External Affairs Complex. An objective of the series is to get these findings out quickly, even if presentations are less than fully polished. The findings, interpretations, and conclusions in these papers do not necessarily represent official Bank policy.

INDICATIVE PLANNING IN DEVELOPING COUNTRIES

Bela Balassa *

Table of Contents

	Page No.
I. Introduction	1
II. An Evaluation of Indicative Planning	1
III. Relying on Incentives and Markets	7
IV. The Role of the Public Sector in Developing Countries . .	14
V. Conclusions	19

* The author is Professor of Political Economy at the Johns Hopkins University and Consultant at the World Bank. He prepared this paper for the Conference on Indicative Planning, held in Washington, D.C. in April 1990. The author is indebted to participants at the Conference and to Mary Shirley for helpful comments and to Shigeru Akiyama for research assistance.

Indicative Planning in Developing Countries

Bela Balassa

I. Introduction

Following the example of the Soviet Union, several developing countries prepared multi-annual plans in the early postwar period. These plans were comprehensive and dirigiste. Their failure brought about changes in the planning process towards an approach that has been christened indicative planning.

Under indicative planning, sectoral targets are established but these are not compulsory for the private sector. In a subsequent stage, these targets have also been abandoned and emphasis has been given to prices and markets.

This paper will deal with indicative planning in developing countries. It will describe the efforts made to undertake indicative planning and evaluate these efforts. It will further consider the more recent orientation towards reliance on incentives and markets. Finally, the role of the public sector will be examined.

II. An Evaluation of Indicative Planning

Indicative planning (for short, planning) involves the establishment of sectoral targets which are not compulsory for the private sector. These targets are imbedded in macroeconomic projections that pertain to a period of several years.

Planning in developing countries goes back to colonial times. In fact, at U.S. insistence, four-year recovery programs were drawn up by the European countries participating in the Marshall Plan, which included their

overseas territories. However primitive these plans were, they provided a basis for planning at the time of independence.

As Killick notes, "in Africa during the 1960s 'having a plan' became almost a sine qua non of political independence. With the active encouragement of the World Bank and other aid agencies, most newly independent states hastened to prepare medium-term development plans, often building upon foundations already laid in the colonial period" (1983, p. 47). He adds that "the general model to which planners aspired was for a 'comprehensive' plan (in the sense of including the private sector and para-statal organizations) that presented a strategy and targets for the development of the economy, typically for a five-year period ..." (Ibid).

The statement about Africa also applies to Asia where countries prepared development plans upon securing independence. Planning assumed particular importance in India where the Soviet example motivated the earlier plans. Multi-annual plans were also prepared in Sri Lanka, Pakistan and, subsequently, Bangladesh.

Different considerations apply to Latin America, where national independence was attained in the 19th century. In the years following the Second World War, the U.N. Economic Commission for Latin America proposed planning to be undertaken by Latin American countries, expressing the view that "the principal task of government ... is to give long-run direction to economic development by the means of detailed plans ..." (Hirschman, 1961, p. 22). However, plans were not prepared until 1961 when the Alliance for Progress program sponsored by the United States came into effect. As Urrutia notes, "in Latin America, development plans were a prerequisite for

qualification for loans from the Alliance for Progress programme" (1988, pp. 5-6).

Foreign aid agencies contributed to planning also elsewhere in the developing world. Thus, "the macro-economic plans that calculated foreign-exchange needs and showed that a country could profitably absorb foreign aid were used by aid officers in bilateral and multilateral agencies to justify credits and grants ... International bureaucracies had trouble convincing donors to lend to countries where such justifications, in the form of plans, did not exist ..." (Ibid, p. 6).

This statement applies to the World Bank as well as to the U.S. government. The World Bank's 1949-50 Annual Report stated that member countries "know, too, that if they formulate a well-balanced development program based on the [Bank] Mission's recommendations, the Bank will stand ready to help them carry out the program by financing appropriate projects" (p. 18). Also, it was noted that the United States "in a complete reversal of Point Four philosophy has shifted its support from technical assistance to planning" (Watson and Dirlam, 1965, p. 48).

But, how about the success of the plans? An early appraisal, in the mid-1960s, was made by Albert Waterston, the World Bank's planning expert. Having reviewed the experience of more than 100 countries, Waterston reached the conclusion that "among developing nations with some kind of a market economy and a sizeable private sector, only one or two countries seem to have been consistently successful in carrying out plans" (1966, p. 14).

More recent reviews of planning experiences of developing countries confirm Waterston's conclusion. Thus, two decades later, Killick concluded

that "medium-term development planning has in most ldc's almost entirely failed to deliver the advantages expected of it" (1986, p. 103).

Killick also carried out a comprehensive survey of the African experience. In his view, "there is no doubt that the general outcome of the above survey of the available evidence on plan execution has been negative ... Actual results show wide dispersion about target levels and planners seem impotent to modify more than marginally the impact of market forces" (1983, p. 57).

In Senegal, "scant attention is paid to implementation and the Ministry of Planning has little idea of what is actually happening" (Ibid, p. 57). In Ghana, "we see an almost total gap between the theoretical advantages of planning and the record of the [seven-year plan, 1963-69]. Far from providing a superior set of signals, it was seriously flawed as a technical document and, in any case, subsequent actions of government bore little relation to it" (Killick, 1978, pp. 144-46). This situation continued in subsequent years and the "five year plan [published in 1975] had even less impact than the seven-year plan of 1963" (Killick, 1983, p. 56). In Tanzania, a sympathetic observer noted that while the 1964-69 plan soon became unoperational, the 1969-74 plan was "standing up better to the test of time" although it remained weak "on the implementation side" (Waide, 1974, p. 49). The economic catastrophe in Tanzania was yet to come.

A detailed study, Plan Implementation in Nigeria, 1962-66 by Dean concluded that the implementation of the plan "was largely unsatisfactory" (1972, p. 241). Apart from the lack of fulfilment of plan targets, "the plan did not play a central role in any other realm of national life. It played a peripheral role in the government's decision-making processes; the

satisfactory growth of the economy prior to 1966 was due more to the private sector than to direct action under the plan" (Ibid, p. 236). This situation continued in the 1970s (Adeniyi, 1980).

Even in Kenya, which has a long tradition in planning, while the pattern of government capital formation was shifted in desired directions, "other policy intentions were only partly fulfilled and some were not acted upon at all. There was, moreover, uncertainty about the extent to which those projects and policies which were executed could correctly be attributed to the plan as such" (Killick, 1983, p. 55).

Another feature of African planning was overoptimism, with realization falling much short of the targets (Ibid, p. 50). This was the case also in India in the periods ranging from dirigiste to indicative planning (Gupta, 1987, Table 1). More importantly, these periods of planning were also periods of poor economic performance. This is indicated by a review of Indian planning in the 1950-75 period.

Our plans were highly sophisticated and elegantly written. Their details were well articulated. They met consistency and sensitivity tests. But when the results achieved in consequence measure so poorly with those of others [in the developing world], sophistication is indeed in danger of turning into sophistry (Patel, 1980, p. 5).

The author adds, "our retrogression in the world economy took place precisely during the golden age of its growth in the postwar period ... We have been left much behind in this race. A close look at the rest of the world economy could give us the impression of our being a decaying rather than a developing country -- at least in a relative way of speaking" (Ibid).

In fact, the planning models used in India were formulated for a closed economy, concentrating on import substitution, with emphasis given to heavy industry. It is only with the Sixth Five Year Plan (1980-85) that

exports emerged as an objective and improvements occurred. Nevertheless, exports were treated as exogenous in the models that failed to include the behavioral aspects of the economy (Jain, 1986, p. 54).

Today, there is increasing understanding in India of the need for policy changes that are not accommodated in the planning model. Thus, Gupta concludes his review of Indian planning by noting that "it is claimed by many economists, with few dissenting voices, that freer entry into the world market and the allowal of the natural extinction of less competitive and unproductive units may result in a revamping of India's industrial management, improvement of productive efficiency, and reduction of industrial costs" (1987, p. 96).

Planning was even less successful in Bangladesh (Hasnath, 1987). Also, in Sri Lanka planning under the socialist government coincided with poor economic performance. Performance improved as the newly-elected conservative government "concentrated on the management of the economy and the implementation of policies and incentives which stimulated growth through the market system" (Gunatilleke, 1988, p. 99).

Economic growth rates were higher in Asian countries where no plans were prepared (Hong Kong and Singapore) or plans concentrated on the public sector and on the preparation of macroeconomic projections (Korea, Malaysia, Taiwan, and Thailand). Mexico, which was perhaps the most successful Latin American economy in the 1960s and 1970s, did not prepare plans while in Colombia medium-term planning gave place to short-term policy making.

In other Latin American countries, planning came into disuse as the period of the Alliance for Progress ended. As noted by Garcia d'Acuna, "the analyses of the Latin American experience leads us to conclude that while there were periods and instances in which planning played a significant role

in orienting the development process in Latin America, it definitely did not manage to insert itself in the real process of decision making and of shaping economic policy" (1982, p. 26).

More generally, the 1980s brought a decline in planning in the developing world. As Urrutia noted "only a few UN agencies and academic economists continued to believe that macro-economic planning could be an effective management tool in developing countries. The attention of the planners in fact focused on short-term policy making" (1988, p. 8).

III. Relying on Incentives and Markets

The decline of planning may be explained in different ways. In a narrower sense, this decline may be attributed to the lack of success of planning or, expressed differently, an unfavorable cost-benefit ratio in planning. In a broader sense, the decline in planning reflects the growing understanding of the importance of incentives and markets vis-à-vis the observed deficiencies of planning. In this connection, the conclusion of a study of planning in developing countries by a World Bank expert deserves full quotation.

Experience has revealed the inherent limitations of the technocratic blueprint in a rapidly changing environment. Available analytical techniques are just not able to cope with the complexity of economic change to produce plans that are up to date, relevant, and comprehensive. Investment planning based on input-output models has fallen foul of unforeseen changes in technical coefficients and demand patterns. Similarly, manpower forecasting has been highly inaccurate because of the difficulties in specifying particular types of skills and in projecting demand over a long period. These technical weaknesses are unlikely to be cured by any foreseeable improvement in data and analytical techniques. Obsession with efforts to improve comprehensive programming capacity diverts attention and resources from more relevant issues. The alternative of making greater use of markets and prices generates less formidable technocratic problems and allows more efficient adjustment (Agarwala, 1983, p. 11).

An important aspect of increased reliance on incentives and markets is participation in the international division of labor. With most developing countries having small domestic markets, productivity can be increased in an open economy. At the same time, there is a conflict between opening the economy and planning. In this regard, conclusions reached by the author nearly a quarter of a century ago remain valid:

It is suggested here that planning, as understood in a narrower sense, is inward-looking in character: It can best be applied in countries whose economy is more or less closed to foreign influences and it provides an inducement for reducing reliance on international trade. To begin with, the uncertainty of plans and forecasts increases with the degree of openness of the national economy. While information on interindustry relationships can be utilized to derive a feasible pattern of production associated with a growth target in a closed economy, disappointed expectations in regard to exports and unforeseen changes in imports will give rise to discrepancies between plans and realization if the foreign trade sector is of importance.

Correspondingly, the chances for plan fulfilment can be increased by limiting dependence on international exchange. And since growth in an open economy is 'unbalanced' in the sense that the production and consumption of individual commodities, and the output of interrelated sectors, are growing at unequal rates, the desire to lessen the uncertainty introduced by foreign trade will necessarily lead to the advocacy of balanced growth (Balassa, 1966, p. 385).

At the same time, outward orientation brings important benefits. This may be indicated by the experience of countries following different policies. Among the countries selected for this analysis, Korea, Singapore and Taiwan consistently followed outward-oriented policies; Argentina, Brazil and Mexico embarked on an inward-oriented strategy but subsequently carried out reforms, especially Brazil; and India is the par excellence case of inward orientation.

The combined shares of the three Far Eastern countries in the manufactured exports of the developing countries increased from 6 percent in 1963 to 32 percent in 1986. Within this group, Korea showed the largest

increase (from 1 to 12 percent), followed by Singapore (from 1 to 6 percent) and by Taiwan (from 4 to 14 percent).

Conversely, India's share in the manufactured exports of the developing countries declined from 20 percent in 1963 to 3 percent in 1986. India was able to increase the volume of its manufactured exports only by 3 percent a year during this period as against an average annual growth rate of 13 percent in all developing countries, taken together.

The combined share of the three large Latin American countries remained unchanged at 8 percent between 1963 and 1986. Argentina and Mexico lost market shares (with a decline from 2 percent to 1 percent in the first case and from 4 percent to 3 percent in the second) while Brazil was a gainer, with an increase from 1 to 4 percent.

While the record of the Far Eastern countries in manufactured export growth is well-appreciated, it is less known that these countries also made substantial gains in exporting non-fuel primary products. Their combined share in the exports of these products by developing countries rose from 2 percent in 1963 to 8 percent in 1986, with the gains being concentrated in Korea and Taiwan. This contrasts with a decline in India's export market share from 4 percent to 3 percent. In the same period, Argentina's market share declined from 7 percent to 5 percent and Mexico's from 4 percent to 3 percent while Brazil's share increased from 7 percent to 10 percent.

It appears, then, that the policies applied affected not only manufactured exports but also the exports of nonfuel primary products. This is hardly surprising, given the discrimination against primary activities, in particular agriculture, associated with inward orientation and the lack of such discrimination under outward-oriented policies.

Taken together, the share of the three Far Eastern countries in the nonfuel exports of the developing countries grew from 9 percent in 1963 to 24 percent in 1986, with Korea showing the largest increase. By contrast, India's market share fell from 6 percent to 3 percent. In Latin America, the combined share of the three countries declined from 16 percent to 11 percent, with the largest decrease shown in Argentina.

Increases in exports contribute to economic growth in a variety of ways. They permit resource allocation according to comparative advantage, allow for the exploitation of economies of scale, ensure fuller use of capacity, and provide incentives for technological change in response to the carrot and the stick of competition, resulting in improvements in the efficiency of investment. Export expansion also tends to lead to higher domestic savings as a greater proportion of incomes are derived from exports, and a higher share of the increments in incomes associated with export growth, is saved.

Incremental capital-output ratios provide a crude indication of the efficiency of investment. In the 1963-86 period, these ratios were the lowest in the Far Eastern countries, averaging 3.3 in Taiwan, 3.6 in Korea, and 4.2 in Singapore. Incremental capital-output ratios in Latin America ranged between 4.4 in Brazil and 9.8 in Argentina; they averaged 5.1 in India.

Savings ratios were by far the lowest in India, 14.8 percent; they averaged 27 percent in the three Far Eastern countries and 23 percent in the three large Latin American countries. Inter-country differences in capital-output ratios and saving ratios, in turn, explain differences in economic growth rates.

In the 1963-86 period, GDP growth rates averaged 9 percent in Korea and Singapore, as well as in Taiwan. They varied between 2 percent in Argentina and 7 percent in Brazil, averaging 6 percent in Mexico. Finally, average GDP growth rates were 4 percent in India. Differences are even larger in per capita terms, with Singapore leading at 8 percent and Argentina and India at the bottom of the list with 1 percent.

Comparisons of incremental capital-output ratios are predicated on the assumption that labor has no opportunity cost. This will not be the case for skilled and technical labor and, for more of the countries concerned, does not hold for unskilled labor either. Correspondingly interest attaches to comparisons of total factor productivity growth that measures change in the productivity of capital and labor combined.

The advantages of outward orientation are apparent from comparisons of estimates of total factor productivity growth for 20 developing countries covering the postwar period. Thus, Chenery (1986, Table 2.2) reports that total factor productivity increased at annual rates of over 3 percent in outward oriented countries while increases were 1 percent or less in countries with especially pronounced inward orientation. In particular, India experienced a decline in total factor productivity in the manufacturing sector between 1959-60 and 1979-80 (Ahluwalia, 1985).

Another study has shown that export expansion was positively, and import substitution negatively, correlated with the growth of factor productivity in 13 Korean, Turkish and Yugoslav industries during the period preceding the quadrupling of oil prices in 1973 (Nishimizu and Robinson, 1984, Table 5). The results obtained for Turkey confirm the conclusions reached earlier by Krueger and Tuncer (1982) for this country.

There is further evidence that exports contributed to the growth of total factor productivity. Thus, in a cross-section investigation of 39 countries, intercountry differences in domestic and foreign investment and in the growth of the labor force explained 53 percent of the intercountry variation in GDP growth rates while adding an export variable raised the coefficient of determination to 0.71 (Michalopoulos and Jay, 1973). Applying the same procedure to pooled data of eleven semi-industrial countries for the 1960-66 and 1966-73 periods, Balassa (1978) found that adding an export variable increased the explanatory power of the regression equation from 58 to 77 percent. Subsequently, Feder separated the effects of exports on economic growth into two parts: productivity differences between exports and nonexport activities and externalities generated by exports, and obtained highly significant results for broadly as well as for narrowly defined categories of semi-industrial countries for the 1964-77 period.

The cited estimates refer to the period of rapid growth in the world economy. Further interest attaches to the question as to whether these results hold up in the subsequent period of external shocks, in the form of the quadrupling of oil prices and the world recession. Applying production function estimation to the 1973-78 period, the earlier findings on the importance of exports for economic growth have been reconfirmed (Balassa, 1985).

Data available for 43 developing countries have further permitted analyzing the implications for economic growth of export orientation at the beginning of the period of external shocks and of policy responses to external shocks in the 1973-78 period. The extent of export orientation in the initial year has been defined in terms of deviations of actual from hypothetical per

capita exports, the latter having been estimated by reference to per capita incomes, population, and the ratio of mineral exports to GNP. In turn, alternative policy responses have been defined as export promotion, import substitution, and additional net external financing.

The impact of export orientation on economic growth is indicated by the existence of a difference of 1 percentage point in GNP growth rates between developing economies in the upper quartile and the lower quartile of the distribution in terms of their export orientation at the beginning of the period of external shocks. Furthermore, a difference of 1.2 percentage points in GDP growth is obtained in comparing the upper and the lower quartiles of the distribution as regards reliance on export promotion, as against import substitution and additional external financing (Ibid).

The results are cumulative, indicating that both initial export orientation and reliance on exports in response to external shocks importantly contributed to economic growth in developing countries during the period under consideration. These factors explain a large proportion of intercountry differences in GNP growth rates in the 1973-78 period, with a difference of 3.2 percentage points between the upper quartile and the lower quartile of the distribution in the 43 developing countries.

These results are immune to the criticism according to which the causation between exports and economic growth is not unidirectional. At the same time, recent research has examined the causes of the favorable effects of exports on economic growth. De Melo and Robinson have put emphasis on externalities derived from exports (1990) while Romer has indicated that outward orientation will increase the benefits derived from research and development (1989).

As noted earlier, in the 1980s developing countries gave increasing attention to prices and markets. This is particularly apparent as far as trade policies are concerned. Thus, while the debt crisis led to the imposition of protective measures in several of these countries, these were undone in subsequent years. As a result, in most of the seventeen highly indebted countries, there was less protection -- both in terms of tariffs and quantitative import restrictions -- in the mid-1980s than before the oil crises (Laird and Nogues, 1988, Table 1).

Trade liberalization was given impetus by World Bank adjustment programs. Among 40 countries that received World Bank trade adjustment loans, policy conditions included establishing realistic exchange rates in 38 cases, improving export policy in 33 cases, and liberalizing imports in 29 cases (Thomas, 1989, Table 1).

The preliminary results show a favorable picture. Trade adjustment loan recipients performed better than nonrecipients in all categories. In particular, they increased exports to a greater extent, and while imports also increased, the adjustment loan recipients improved their resource balance compared with nonrecipients. They also exhibited improved performance in GDP growth, investment ratios, and inflation and reduced their debt-export and debt service-export ratios (Ibid, Table 4).

IV. The Role of the Public Sector in Developing Countries

If reliance on incentives and markets should be given preference over indicative planning, the question remains what should be the role of the public sector in developing countries. This question will be addressed by considering the choice between public and private enterprises in the

manufacturing sector, the size of the government, the implication of public investments, and the evaluation of public sector projects.

Considerable evidence has accumulated on the relative efficiency of public and private enterprises (Balassa, 1987). In the case of Brazil, it has been reported that the rate of return on equity in public enterprises was one-half that in private enterprises in 1974 and in 1978. Also, in Israel, before-tax profits averaged 1.6 percent on sales in public enterprises, compared with 11.6 percent in private enterprises, in 1976-78 (Ayub and Hegstad, 1986, p. 15). Finally, in India, public enterprises in the manufacturing sector earned a rate of return of just over 2 percent, while private firms earned a rate of return of over 9 percent, in 1976 (Choksi, 1979, pp. 23-24).

Yet, the profit figures overstate the efficiency of public enterprises that pay very low, and even nil, interest on public loans in the three countries. Also, public enterprises receive transfers from the government budget while they are subject to price control. Finally, the calculations make no adjustment for differences between market and shadow prices. Such adjustments have been made in the case of public enterprises in 26 Egyptian manufacturing industries, for which financial and economic rates of return have been calculated for fiscal year 1980/81. The results show considerable differences between the two sets of calculations, reflecting the importance of price distortions in Egypt. They also indicate that, on balance, differences between market and shadow prices have raised financial over economic rates of return in Egyptian public enterprises. Thus, while only one-half of public industries had a financial rate of return of less than 10 percent, one-half of them had a negative rate of economic return (Shirley,

1983, p. 33). Although comparisons with private firms are not available, this result puts the Egyptian public enterprises in the manufacturing sector in an unfavorable light.

Comparisons of various performance indicators for public and private firms have been made for Turkey. The results show that, in 1979, labor productivity was 30 percent higher in private than in public enterprises, even though the latter had a capital-labor ratio 50 percent higher (Ibid, p. 16). Another study showed that, in 1976, public enterprises utilized 1 percent more labor and 44 percent more capital per unit of output than private enterprises in the Turkish manufacturing sector (Krueger and Tuncer, 1980, p. 43).

These results are confirmed by estimates of economic rates of return for 123 Turkish manufacturing firms in 1981. In manufacturing taken as a whole, the economic rate of return averaged -0.7 percent in public enterprises and 6.2 percent in private enterprises. Only in two sectors (iron and steel products and electrical machinery) out of fourteen was the economic rate of return higher in the public than in the private sector; rates of return were equal for textiles.

At the same time, public enterprises were favored by the system of incentives applied. Thus, the effective rate of subsidy, indicating the combined effects of import protection, tax, and credit preferences, averaged 31 percent in the private sector and 49 percent in the public sector. The incentive measures applied, then, benefited the largely inefficient public enterprises at the expense of private enterprises (Yagci, 1984, pp. 86 and 97).

Overall comparisons are open to the objection that public and private enterprises may be in different industries. However, firm-by-firm comparisons

of efficiency levels for Brazil, India, Indonesia, and Tanzania also show the superiority of private over public enterprises. In the case of the Brazilian plastics and steel industries, the level of technical efficiency was shown to be lower in public than in private firms (Tyler, 1979). In India, it was found that productivity in the fertilizer industry was lower in the public than in the private sector, and the differences were explained only in part by higher input costs due to the government imposing the use of high cost domestically-produced feedstock on public enterprises and by outdated technology stemming from the lack of renewal of old equipment (Gupta, 1982).

In the Indonesian manufacturing sector, production costs in public enterprises were shown to be generally higher than in private enterprises (Funkhouser and MacAvoy, 1979). In particular, "by almost any indicator, the economic performance of the state mills has been inferior to that of private mills" in weaving (Hill, 1982, p. 2025). Finally, a study of more than 300 firms in ten Tanzanian industries has found that 23 out of 32 public enterprises used both more capital and more labor than privately-owned firms in the same industry (Perkins, 1983).

A variety of factors account for the apparent poor performance of public enterprises in the manufacturing sector of the developing countries, some of which have been referred to already in regard to particular cases. A comparative study lists "(i) inadequate planning and poor feasibility studies resulting in ill-conceived investments; (ii) lack of skilled managers and administrators; (iii) centralized decision making; (iv) state intervention in the day-to-day operation of the firm; (v) unclear multiple objectives; and (vi) political patronage" (Choksi, 1978, p. iv). One may add overmanning, the payment of excessively high wages and/or social benefits, slowness in

decision-making, and the lack of the threat of bankruptcy. All these factors are related to two basic conditions: the absence of clear-cut objectives for managers and state intervention in firm decision making.

In view of these disadvantages of public enterprises, reliance should be based on private enterprises in the manufacturing sector. This conclusion has been increasingly understood in developing countries as witnessed by recent tendencies towards privatization. The question remains, however, what may be the appropriate size of the government in these countries.

In this connection, reference may be made to results obtained by the author in examining the effects of the size of the government, measured by the share of government consumption in GDP, on the rate of economic growth. The results for 90 developing countries show a negative relationship between the two variables, statistically significant at the one percent level. The government consumption variable is also shown to be negatively related to economic growth in regional subsamples, including Africa, Asia, and Latin America, with the significance level varying between 1 and 10 percent (Balassa, 1988, Table 3).

These results indicate that increases in the size of the government unfavorably affect growth performance in developing countries. This may be explained by the adverse effects of higher taxes necessary to finance larger government consumption.

But how about the relationship between public investment and economic growth? The author has shown that increases in the share of public investment in total investment are negatively correlated with the ratio of total investment to GDP and positively correlated with the incremental capital-

output ratio. These results cumulate, leading to a negative effect of the share of public investment on economic growth (Ibid, Table 4).

The adverse effects of public investment on total investment may be explained in part by the crowding-out of private investment and in part by the unfavorable climate created for private investment. In turn, the estimates pertaining to the incremental capital-output ratio indicate the lower efficiency of public investment, pointing to the neglect of economic considerations in public investment.

Nevertheless, there is evidence that infrastructural investments favorably affect private investment (Blejer and Khan, 1984, p. 396). This may be explained by the fact that infrastructural investment creates opportunities for private investment.

The public sector thus has a role to play in providing infrastructural investments. At the same time, such investments should be subject to rigorous project evaluation so that appropriate choices may be made about alternative investments. They should also be based on multiannual programs. Thus, the usefulness of planning re-emerges in the confines of public sector investment in infrastructure.

V. Conclusions

This paper has provided an evaluation of indicative planning in developing countries. It has further considered recent efforts to increase reliance on prices and markets. Finally, the role of the public sector in developing countries has been examined.

Indicative planning involves the establishment of sectoral targets which are not compulsory for the private sector and are imbedded in macroeconomic projections that pertain to a period of several years.

Indictive planning has been widely practiced in developing countries during the postwar period. At the same time, the review presented in this paper indicates that it has failed to have favorable economic effects.

The 1980s have brought about a decline in indicative planning in the developing world. This decline may be explained by the lack of success of planning and by the growing understanding of the importance of incentives and markets. An important aspect of increased reliance on incentives and markets is participation in the international division of labor that conflicts with planning. At the same time, participation in the international division of labor brings important benefits in increasing total factor productivity, and thereby contributing to economic growth.

Apart from giving preference to incentives and markets over indicative planning, the paper has indicated the advantages of private enterprise over public enterprise, the desirability of limiting the size of the government, and the advantages of private over public investment. However, infrastructural investment creates opportunities to private investment. At the same time, such investment should be subject to rigorous project evaluation and be undertaken in the framework of multiannual programs.

References

- Adeniyi, Eniola O., "National Development Planning and Plan Administration in Nigeria," Journal of Administration Overseas, 19, 3, July 1980.
- Agarwala, Ramgopal, "Planning in Developing Countries. Lessons of Experience" World Bank Staff Working Papers No. 576, Washington, D.C., December 1983.
- Ayub, Mahmood Ali and Sven Olef Hegstad, "Public Industrial Enterprises. Determinants of Performance," Industry and Finance series Volume 17, Washington, D.C., World Bank, July 1986.
- Balassa, Bela, "Planning in an Open Economy," Kyklos, 19, 3:383-410, 1966.
- Balassa, Bela, "Exports and Economic Growth: Further Evidence," Journal of Development Economics, 5, 1:181-189, June 1978.
- Balassa, Bela, "Exports, Policy Choices, and Economic Growth in Developing Countries After the 1973 Oil Shock" Journal of Development Economics 18, 1:23-35, May-June 1985.
- Balassa, Bela, "Public Enterprise in Developing Countries: Issues of Privatization." In Manfred Neumann and Karl W. Roskamp, eds. Public Finance and Performance of Enterprises, pp. 417-433, Detroit: Wayne University Press, 1989.
- Balassa, Bela, "Public Finance and Economic Development," World Bank Policy, Planning, and Research Working Papers No. 31, August 1988.
- Blejer, Mario T. and Mohsin S. Khan, "Government Policy and Private Investment in Developing Countries," IMF Staff Papers, 31, 2:379-403, June 1984.
- Chenery, Hollis B., "Growth and Transformation." In Hollis B. Chenery, Sherman Robinson, and Moshe Syrquin, eds., Industrialization and Growth, pp. 13-36, New York; Oxford University Press, 1986.
- Choksi, Armeane M., "State Intervention in the Industrialization of Developing Countries. Selected Issues," World Bank Staff Working Paper No. 341, Washington, D.C. July 1979.
- Dean, Edwin, Plan Implementation in Nigeria, 1962-66, Ibadan: Oxford University Press, 1977.
- de Melo, Jaime and Sherman Robinson, "Productivity and Externalities: Models of Export-Led Growth," World Bank Policy, Planning, and Research Working Papers No. 387, Washington, D.C., March 1990.
- Feder, Gershon, "On Exports and Economic Growth," Journal of Development Economics, 12, 2:89-93, February-April 1983.

- Funkhouser, R. and Paul W. MacAvoy, "A Sample of Observations on Comparative Prices in Public and Private Enterprise," Journal of Public Economics, 11, 3:353-368, June 1979.
- Garcia d'Acuna, Eduardo, "Pasado y futuro de la planificación en América Latina," Penseamento Iberoamericano, 5, 2:15-45, July-December, 1982.
- Gunatilleke, Godfrey, "Planning in Uncertainty: The Case of Sri Lanka." In Miguel Urrutia and Setsuko Yukawa, eds. Development Planning in Mixed Economies, pp. 33-106, Tokyo: The United Nations University, 1988.
- Gupta, M., "Productivity Performance of the Public and the Private Sectors in India: A Case Study of the Fertilizer Industry," Indian Economic Review, 17, 24, April-December 1982.
- Gupta, S., "Indian Plans: Retrospects and Prospects," The Indian Economic Journal, 34, 4:87-111, April-June, 1987.
- Hasnath, Syed Abu, "The Practice and Effect of Development Planning in Bangladesh," Public Administration and Development, 7, 1:59-75, March 1987.
- Hill, Hal, "State Enterprises in a Competitive Industry: An Indonesian Case Study," World Development, 10, 11:1015-1023, November 1982.
- Hirschman, Albert O., Latin American Issues, New York: Twentieth Century Fund, 1961.
- International Bank for Reconstruction and Development, Annual Report, 1949-50, Washington, D.C. 1950.
- Jain, Anil Kumar, "Strategies and Techniques of India's Five Year Plan," Economic Bulletin for Asia and the Pacific, 37, 1:42-54, June 1986.
- Killick, Tony, Development Economics in Action: A Study of Economic Policies in Ghana, London: Heinemann Educational Books, 1978.
- Killick, Tony, "Development Planning in Africa: Experiences, Weaknesses and Prescriptions," Development Policy Review, 1, 1:47-76, May 1983.
- Killick, Tony, "Twenty-five Years of Development: The Rise and Impending Decline of Market Solutions," Development Policy Review, 4, 2:99-116, June 1986.
- Krueger, Anne O. and Baran Tuncer, "Estimating Total Factor Productivity Growth in a Developing Country," World Bank Staff Working Paper No. 422, Washington, D.C., October 1980.
- Krueger, Anne O. and Baran Tuncer, "An Empirical Test of the Infant Industry Argument," American Economic Review, 70, 5:1142-1152, December 1982.

- Laird, Sam and Julio Nogues, "Trade Policies and the Debt Crisis," World Bank Policy, Planning, and Research Working Papers No. 98, September 1988.
- Nishimizu, Mieko and Sherman Robinson, "Trade Policies and Productivity Change in Semi-Industrialized Countries," Journal of Development Economics, 16, 1:177-206, September-October, 1984.
- Patel, Surendra J. "Planned Development in India. Review of Major Changes," Mainstream, 5, 1:1-10, January 1980.
- Perkins, F. S., "Technology Choice, Industrialization, and Development Experiences in Tanzania," Journal of Development Studies, 19, 2:213-247, January 1983.
- Romer, Paul M., "What Determines the Rate of Growth of Technological Change?", World Bank Policy, Planning, and Research Working Paper, No. 279, September 1989.
- Shirley, Mary M., "Managing State-Owned Enterprises," World Bank Staff Working Paper No. 577, Washington, D.C., July 1983.
- Thomas, Vinod, "Developing Country Experience in Trade Reform," World Bank Policy, Planning, and Research Working Papers No. 295, October 1989.
- Tyler, William G., "Technical Efficiency in Production in a Developing Country: An Empirical Examination of the Brazilian Plastics and Steel Industries," Oxford Economic Papers, 31, 3:477-485, November 1979.
- Urrutia, Miguel, "New Approaches to Development Planning." In Miguel Urrutia and Setsuko Yukawa, eds. Development Planning in Mixed Economies, pp. 1-15, Tokyo; The United Nations University, 1988.
- Waide, E. Bevan, "Planning and Annual Planning as an Administrative Process." In A. H. Rweyemanu and B. V. Mwansasu, eds., Planning in Tanzania, Nairobi: East African Literature Bureau, 1974.
- Waterston, Albert, "A Hard Look at Development Planning," Finance and Development, 3, 2:85-91, June 1966.
- Watson, Andrew and Joel B. Dirlam, "The Impact of Underdevelopment on Economic Planning," Quarterly Journal of Economics, 79, 2:167-194, May 1965.
- Yagci, Fahrettin, "Protection and Incentives in Turkish Manufacturing. An Evaluation of Policies and their Impact in 1981," World Bank Staff Working Paper No. 660, Washington, D.C., July 1984.

PRE Working Paper Series

	<u>Title</u>	<u>Author</u>	<u>Date</u>	<u>Contact for paper</u>
WPS416	World Bank Efforts at Poverty Measurement in the Third World: The Living Standards Measurement Study	Paul Glewwe		
WPS417	Modeling the Macroeconomic Requirements of Policy Reform	William Easterly E. C. Hwa Piyabha Kongsamut Jan Zizek	May 1990	R. Luz 34303
WPS418	Does Devaluation Hurt Private Investment? The Indonesian Case	Ajay Chhibber Nemat Shafik	May 1990	M. Colinet 33490
WPS419	The Design and Sequencing of Trade and Investment Policy Reform: An Institutional Analysis	Brian Levy	May 1990	B. Levy 37488
WPS420	Making Bank Irrigation Investments More Sustainable	Gerald T. O'Mara	May 1990	C. Spooner 30464
WPS421	Taxation of Financial Intermediation: Measurement Principles and Application to Five African Countries	Christophe Chamley Patrick Honohan	May 1990	W. Pitayato- nakam 37666
WPS422	Civil Service Reform and the World Bank	Barbara Nunberg John Nellis	May 1990	R. Malcolm 37495
WPS423	Relative Price Changes and the Growth of the Public Sector	M. Shahbaz Khan	May 1990	WDR Office 31393
WPS424	Mexico's External Debt Restructuring in 1989-1990: An Economic Analysis	Sweder van Wijnbergen		
WPS425	The Earmarking of Government Revenues in Colombia	William A. McCleary Evamaria Uribe Tobon		
WPS426	Growth-Oriented Adjustment Programs: A Statistical Analysis	Riccardo Faini Jaime de Melo Abdel Senhadji-Semlali Julie Stanton		
WPS427	Exchange Reform, Parallel Markets and Inflation in Africa: The Case of Ghana	Ajay Chhibber Nemat Shafik		
WPS428	Perestroika and Its Implications for European Socialist Countries	Bela Balassa	May 1990	N. Campbell 33769

PRE Working Paper Series

	<u>Title</u>	<u>Author</u>	<u>Date</u>	<u>Contact for paper</u>
WPS429	An Analytical Review of Ghana's Cocoa Pricing Policy with Recommendations for Future Policy Formulation	Merrill J. Bateman Alexander Meeraus David M. Newbery William Asenso Okyere Gerald T. O'Mara		
WPS430	Rural-Urban Growth Linkages in India	Peter B. Hazell Steven Haggblade		
WPS431	Recent Developments in Marketing and Pricing Systems for Agricultural Export Commodities in Sub-Saharan Africa	Panos Varangis Takamasa Akiyama Elton Thigpen		
WPS432	Policy Choices in the Newly Industrializing Countries	Bela Balassa	May 1990	N. Campbell 33769
WPS433	Education and Development: Evidence for New Priorities	Wadi D. Haddad Martin Carnoy with Rosemary Rinaldi and Omporn Regel		
WPS434	Tax Sensitivity of Foreign Direct Investment: An Empirical Assessment	Anwar Shah Joel Slemrod		
WPS435	Rational Expectations and Commodity Price Forecasts	Boum-Jong Choe		
WPS436	Commodity Price Forecasts and Future Prices	Boum-Jong Choe		
WPS437	Institutional Development Work in the Bank: A Review of 84 Bank Projects	Cheryl W. Gray S. Khadiagalla Richard J. Moore		
WPS438	Productivity Effects of Redistribution in a Socialist Economy: The Case of Yugoslavia	Milan Vodopivec		
WPS439	Indicative Planning in Developing Countries	Bela Balassa	May 1990	N. Campbell 33769