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ENVIRONMENTAL SCANNING FOR CORPORATE
PLANNING IN INDIA

by

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ABSTRACT (within 250 words)

The need for environmental scanning acquires great policy significance for both the micro-unit and the macro-economy in a developing country like India which is trying to achieve the objectives of economic development and distributional justice simultaneously through national planning.

This Paper attempts to provide a framework for scanning the external environment of a large industrial enterprise in the private sector in India to help the company in the long term planning of its activities.

The impact of international conditions, technological conditions, national economic conditions, social conditions, demographic conditions, political conditions and governmental regulatory conditions impinging upon the existing activities of the company is analysed. Special study is made of the opportunities and constraints imposed by the national priorities set up by the planning authorities of a developing country such as India in her five year plans. The impact of national economic policies in shaping the future of a large enterprise is brought into focus. The likely influence of such policies on the economic development of the nation is briefly discussed.

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Date 19.3.1974

Charan D. Badhva
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ENVIRONMENTAL SCANNING FOR CORPORATE PLANNING IN INDIA*

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The importance of environmental scanning for corporate planning is well recognised by now.² The existing and potential opportunities, threats and constraints for the operation of the corporation are likely to be shaped by the external conditions with which it has to live with. However, the subject acquires special significance in the context of a developing country like India where the government is engaged in the constant pursuit of influencing the level of economic activity in the country to simultaneously achieve the objectives of economic development and social justice in a planned manner. The purpose of this paper is to analyse some of the relevant external conditions for environmental analysis in the context of strategic planning of a large sized corporation in India and to present an operational framework for such analysis with reference to the investment decision making for diversification of the activities of the corporation during the period of next five years converging with the country's Fifth Five Year Plan (1973-74 to 1978-79).

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¹ This paper is based on my experience of undertaking studies of environmental analysis for a large corporation and a commercial bank. I have greatly benefitted from the work of Professors Samuel Paul and S.K. Bhattacharyya in these studies.

² See, for example, F.J. Aguilar, Scanning the Business Environment, New York: The Macmillan Company, 1967.

The Corporation and Environmental Analysis

Theodore Rubin has characterised the environment, present or future, as a "set of outcomes, situations or social conditions which is the policy consequence of the interaction of technology and social institutions". According to him, the purpose of environmental analysis is "to establish the linkages among these outcomes and the institutions, policies and technologies which shape them".³

The task of external environmental analysis can be enormous in view of the multi-dimensions of the environment variables to be analysed. In its broadest form, as S.K. Bhattacharyya has pointed out, "it involves the scanning of the entire spectrum of the social, political, technological and economic forces likely to have a bearing on the future performance of the organisation, the industry to which it belongs, the business generally, with a view to determining what the organisation can reasonably seek to achieve during the strategic plan period".⁴

Strategic planning is concerned with determining the fundamental objectives of the corporation and the activities which it must undertake to achieve these objectives in an integrated and harmonious pattern.

³Theodore J. Rubin, "Toward Information Systems for Environmental Forecasting" in Erich Jantsch (edited), Perspectives of Planning, Paris: Organisation for Economic Cooperation and Development, 1969, p.287.

⁴S.K. Bhattacharyya, "Strategic Planning: Some Operational Considerations" Economic and Political Weekly (Bombay), Vol. VII, No.22, Review of Management, May 27, 1972, p. M-66.

A comprehensive analysis of external conditions would serve as an essential input to the top management for chartering the future of the Corporation. Environmental analysis would include not only the study of the past behaviour of the variables constituting "environment" and current trends in their behaviour, but also forecasting the changes in these variables in the future during the horizon of strategic planning. The latter task, though vital in the planning process, is certainly the most difficult one in view of the uncertainties attached to the behaviour of the variables of the environment set under dynamic conditions in a world of interdependence among the actors across firms, across industry, across sectors of business within a nation and across nations. This requires the continuous review of environmental analysis in a systematic fashion as an aid to long term corporate planning.

The Relevant Environment

It is here that the concept of the relevant "environment" for the user becomes very useful. Each user (actor) of environmental analysis is interested in his own "environment" (rather than with the totality of the environment) which he can affect through "adaptation or control". This concept agrees very well with the notion of a firm as a "system", composed of a number of parts, whose activities it seeks to integrate for the achievement of its objective.⁵ As Rubin has very well pointed out, "The totality of the environmental system has relevance to no single actor. As a corollary, the relevant environment for any particular actor is equivalent to only a small part of the environmental

⁵ Cf., Neil W. Chamberlain, Enterprise and Environment, New York: McGraw-Hill, 1968.

system. As a result of this narrowing down of the concept of "environment" the environmental analyst is in a much happier position. According to Rubin, this is so because this fact reduces "the potential of error by omission in environmental analysis". However, Rubin rightly adds that the same fact also "places a responsibility on the actor to "know himself" so that he may know what environmental information is relevant to his social purpose."⁶

The fact that each user of the environmental analysis is interested in his "own" relevant environment does not preclude the existence of a common sub-set of his environment with the environment of other actors in similar position which are his competitors even though none of them is interested in the global concept of environment which can cover anything and everything in the world. It is this sub-set of environment which is common to large sized corporations in India that we are interested in. We will specifically be interested in the common part of the environment for those large companies who wish to diversify their output (a strategic decision involving investment planning). We will thus be mainly concerned with the analysis of one aspect (though a very important aspect) of strategic planning of a corporation based on environmental analysis.

II

Scanning for Corporate Planning in India

In the Indian context, the governmental policy has a dominant role in the relevant environment for corporate planning for large

⁶Rubin, op.cit, p.291

enterprises. We may now conceive of the corporation as a part of the larger economic system where the central government is responsible for controlling the operations of the large corporations with the twin objectives of promoting growth in priority areas and reducing the degree of concentration of economic power. These objectives are often conflicting.⁷

The complexities of the relevant variables for environmental analysis for corporate planning are probably much more in an economy like India operating under a regime of administrative controls extending to many areas of corporate decision making in the industrial sector of the economy. An approach to the information system for analysing external conditions has been proposed by Philip Thomas.⁸ However, his approach is merely classification-oriented in the sense that he lists in a table in a matrix form the environmental information system classified at one side by content level (such as political conditions, social conditions, etc.) and at the other side by resolution level (such as global level, national level) and lists some of the factors falling under each box. It is not our purpose here either to prepare a comprehensive list of external factors affecting the business operations of the corporation at the international level, at the national

⁷ For the purpose of this paper, a large enterprise is defined as under the Monopolies and Restrictive Trade Practices Act, 1969, having total assets (including assets of inter-connected companies) of Rs.20 crores or more.

⁸ Philip Thomas, "External Conditions in Corporate Planning", *op.cit.*, and in, "Environmental Analysis for D.F.C. Planning" (unpublished as yet). He has cited a paper by Nancy Baster on "Development Indicators" from the Journal of Development Studies, Vol. 8, No.3, April 1972 in which she has given a list of "development indicators" in the context of measuring and comparing development of a nation which has been found useful for the purpose in hand.

level, at the sectoral level, at the industry level and finally at the firm level (or in combination at various levels simultaneously) or to critically examine the attempts made by other researchers at preparing such a list. Undoubtedly, it is necessary to know the various factors constituting technological conditions, social conditions, demographic conditions, political conditions, national economic conditions, competitive conditions, international economic conditions and governmental regulatory conditions within the country (countries) in which the particular firm is operating and to understand the resolution level at which each of the relevant factors qualitatively influences the firm in question. But much more important is some quantification (however crude it may be in view of the state of our knowledge in model building in these areas) of the degree of influence of each of the relevant external environmental conditions on the business operations of the firm in the past and currently and to attempt to forecast the influence of these and "other new" relevant variables on the business operations of the firm in the future during the period of the strategic plan. The difficulties of forecasting changes in external conditions and estimating their impact on the firm are multiplied manifold in a country like India where the impact of governmental regulatory conditions is pervasive on the business operations of a large enterprise and where changes in such regulations are a very frequent affair. As Philip Thomas has rightly pointed out, "The thicket of regulatory conditions is particularly dense in India and constitutes probably the single most

important obstacle to forecasting for the purpose of corporate planning in the country."⁹

In the context of a recent study of environmental conditions for strategic planning of a large industrial enterprise in India (producing a number of industrial products) with a planning horizon of five years, we analysed the input-output structure of the products and product lines, the end-users of the products and the nature of competition faced by this enterprise. On the basis of such an empirical study of the economic structure of the enterprise and a look at the external conditions affecting the business operations of this enterprise in the last ten years and more so during the last two years, we found that economic and regulatory conditions constituted the two most important groups of external factors mainly operating at the industry-level which affected the operations of this enterprise.

Through this empirical study based on time-series analysis, we were able to identify the following selected macro-economic indicators of environmental conditions which had significant effect on the business operations of this enterprise:

- 1 Government expenditure in the economy;
- 2 Level of industrial production in the economy and degree of capacity utilisation in the "industry" (to which this enterprise belonged to);
- 3 Availability of steel;
- 4 Availability of power; and
- 5 Foreign exchange situation (in the country).

⁹ Philip Thomas, "External Conditions in Corporate Planning", op.cit., p.M-102.

On the basis of the above-mentioned study, we identified the following selected micro-economic indicators to be the major external influences on the business operations of the enterprise:

- 1 Growth and profitability of end-user industries;
- 2 Changes in the (technical) characteristics of the products required by the end users;
- 3 Behaviour of Government as a buyer;
- 4 Nature of competition offered by the public sector units as supplier of competing products; and
- 5 Nature of competition offered by the competitors in the private sector with special reference to quality, price and efforts at development of new products through research and development.

We also looked at the major governmental regulatory conditions affecting the business operations of the large enterprise for which we undertook environmental analysis. We found that the following regulatory conditions were exerting significant influence on the operations of this enterprise:

- 1 Industrial licensing policy;
- 2 Monopolies and Restrictive Trade Practices (M.R.T.P.) Act;
- 3 Allocation of foreign exchange (for import of capital goods and strategic raw materials and components normally not available indigenously);
- 4 Policy on export obligations and import substitution (including incentives and/or obligations for expenditures on research and development); and
- 5 Policy on technical collaborations with foreign companies.

III

An Operational Framework for Planning Diversification of Output by a
Large Enterprise

We now propose to go to the specific case of addition to the existing lines of manufacture by a large enterprise and construct an operational framework for analysing the possibilities and choices for planning the diversification of output of a large industrial corporation coming within the purview of the M.R.T.P. Act during the planning horizon of the period of our Fifth Five Year Plan (1973-74 to 1978-79). For this purpose we have made the simplifying assumption that the corporation makes the strategic decision of adding a new product to its product lines on the basis of three criteria, namely,

- (1) What is the potential growth rate of demand for the product?
- (2) What is the potential profitability of the product?
- (3) What is the likely degree of governmental control in decision making for managing the production, pricing and marketing of the product?

The next problem in making this analysis operational is to decide as to how to measure the potential growth rate of demand, profitability and intensity of governmental control for a product (called an "industry") and to rank industries in order of their performance with respect to each of the above-mentioned three criteria. Thus a market segmentation approach can be used as a systematised aid to strategic planning by a corporation.

Even though several sophisticated methods of demand projections are now in use by researchers of corporations for short term forecasting (say for one to two years), they are not likely to be very reliable for longer periods. It is here that we can make use of the information provided in a document like the nation's Five Year Plan. The target rates of growth of output of industries set by the macro planning authorities reflect the minimum rate of growth of demand for output of those industries expected during the horizon of the plan. Schollhammer has summarised the benefits of effectively using the general information which the national plan offers to a firm's specific situation in the following words:

"A national plan is a kind of large-scale market survey which provides business executives with consistent information about future developments and anticipated governmental actions. It conveys not only what is probable but also what is desirable; it shows what the objectives are and specifies the means by which the public authorities intend to attain them. Consequently, business executives can make strategic decisions under reduced uncertainties, which result in less wastage, a higher economic efficiency, and increased freedom in the form of wider opportunities for growth of the individual firm in an expanding and coordinated economy."¹⁰

The effective use of the general information on the sectoral growth envisaged of the national income as well as the specific information on the target rates of growth of selected industries in the document of the national five year plan requires skills of a competent analyst. In view of the fact that the achieved rates of growth of output do differ from the target rates of growth of output of various industries, a continuous review of the likely rate of growth of output will have to be made by the analyst supplemented with his knowledge of all other available information in the framework of an input-output model of the economy.

¹⁰ Hans Schollhammer, "National Economic Planning and Business Decision-Making: The French Experience", California Management Review, Vol. XII, No.2, Winter 1969, pp.74-78.

The profitability of an "industry" can be measured by several alternative criteria. For measuring the potential profitability of a product, we have chosen the criterion of the average rate of return on the networth (measured as the rate of profit-after-tax (PAT) to networth (NW) expressed in percentage terms). We have chosen this criterion over other criteria (such as the ratio of gross profits to total capital employed) since we believe that the criterion reflects the rate of return on shareholders' funds. Information the behaviour of this ratio during the recent past is usually available from the sample surveys of the performance of public limited companies. In India, the Reserve Bank of India publishes every year the estimates of alternative profitability ratios of 1501 selected public limited companies operating in various industries. Another source for such empirical studies is the report of the Economic Times Research Bureau on the performance of 714 public limited companies covering various industries. Even though these sample surveys by these two sources cover different companies and different industries, their coverage in terms of the total paid up capital of all the public limited companies is nearly the same (around 80 per cent).

For illustrating the analysis of market segmentation of industries on the basis of potential profitability criterion as chosen by us, we have made the highly simplifying assumption that the average rate of profitability of the industries to be analysed obtained during the last two years for which the data is available at present will be maintained during the period of the strategic plan of next five years.

A more realistic analysis of such a study would require continuous updating of information supplemented by the experience of other firms in similar position.

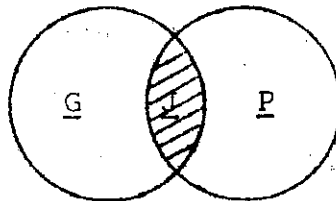
It should be theoretically possible to evolve a formula for measuring the degree (or intensity) of governmental control on the production, pricing and marketing assigning weightages to the various elements constituting the controls in these functional areas. There can be differences of opinion on the empirical measurement of this concept due to arbitrariness of the weights involved. We have chosen only one element of control, namely, whether there is price control on the final product, to illustrate the segmentation analysis of industries on the basis of the criterion of degree of control and neglected all other elements for the sake of simplifying our model.

We have to define the relevant set of industries for which the market segmentation analysis needs to be carried out for the consideration of the top management of a large enterprise for making investment in a new product. Such a decision is subject to the regulations of the industrial licensing policy of the Government of India. The search for the relevant set of industries for the consideration of large enterprises must, therefore, be made in the context of the role envisaged for such enterprises in the current industrial licensing policy announced by the Government of India in February 1973 which reflects the national priorities for investment in industries to achieve the objectives of economic development, social justice and self-reliance envisaged in the period of our Fifth Five Year Plan (1973-74 to 1978-79).

It would be worthwhile here to present a graphic analysis in set-theoretic terms of the salient features of the industrial licensing policy of the Government of India envisaged for the period of the Fifth Five Year Plan.

The industrial economy of India during the period of the Fifth Plan would consist of the Public (or Government) sector wholly owned and managed by the government (denoted by set G), the Private Sector (denoted by set P) and the Joint Sector (denoted by set J) where there is common ownership and management of industries by the government and the private sector (usually belonging to large enterprises as defined under the M.R.T.P. Act) but where the government would have the dominant role in decision making in strategic areas.¹¹ This is illustrated below in Chart 1.

CHART 1



$$J = \underline{G} \cap \underline{P}$$

¹¹ For a critical analysis of the joint sector concept and the new industrial licensing policy of February 1970 of the Government of India (before the announcement of February 1973), see my paper, "New Industrial Licensing Policy: An Appraisal" in C.D. Wadhva (ed.), Some Problems of India's Economic Policy, New Delhi: Tata McGraw-Hill, 1973, pp.199-215.

A controversy had been raging in the government quarters regarding the role of the joint sector for quite some time. The concept has been clarified to some extent in the industrial licensing policy statement of the Government of India. We quote below the relevant segments of this statement relating to the joint sector:¹²

"Government's policy regarding the joint sector is derived from the industrial policy resolution, 1956 and the objective of reducing the concentration of economic power. In appropriate cases, the central and state governments have taken equity participation either directly or through their corporations with private parties. Some joint sector units have come up in this way. This type of joint sector unit is a device which may be resorted to in specific cases having regard to the production targets of the Plan. Each proposal for establishing a joint sector unit of this nature will have to be judged and decided on its merits in the light of government's social and economic objectives. The joint sector will also be a promotional instrument, as for instance, in cases where state governments go into partnership with new and medium entrepreneurs in order to guide them in developing a priority industry."

"Government specifically wish to clarify that the joint sector will not be permitted to be used for the entry of larger houses, dominant undertakings and foreign companies in industries in which they are otherwise precluded on their own. In all the different kinds of joint sector units, the government will ensure for itself an effective role in guiding policies, management and operations, the actual pattern and mode being decided as appropriate in each case."

For the purpose of illustrating the licensing policy of the Government of India regarding new industries to be set up during the period of the Fifth Plan of relevance to large corporations, we may represent the total set of new industries to be set up during

¹² The text of the press release on the subject may be seen in the Economic Times (Bombay), February 3, 1973.

this period (I) and its various sub-sets as in Chart 2 below in three parts:

CHART 2

CHART 2A

THE TOTAL SET OF ALL INDUSTRIAL UNITS TO BE SET UP DURING FIFTH PLAN

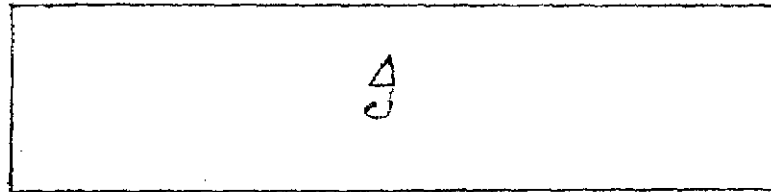


CHART 2B

THE NORMAL FIELD OF OPERATIONS FOR SETTING UP NEW INDUSTRIAL UNITS
BY LARGE ENTERPRISES

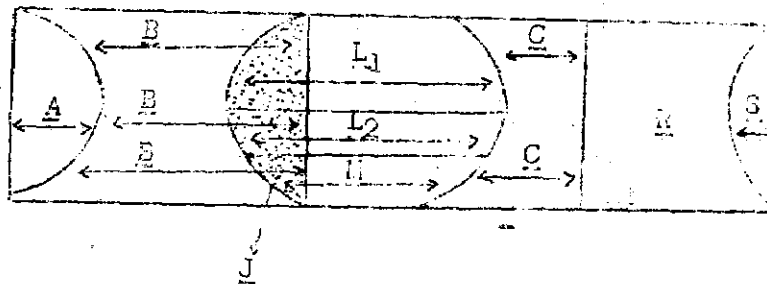
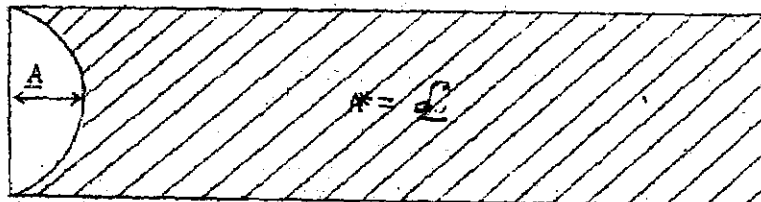


CHART 2C

THE EXCEPTION MADE FOR LARGE ENTERPRISES TO SET UP DOMINANTLY
EXPORT-ORIENTED UNITS



THE EXCEPTION MADE FOR LARGE ENTERPRISES TO SET UP DOMINANTLYEXPORT-ORIENTED UNITS

The following symbols are used to denote subsets in Chart 2B and 2C above:

- A = Schedule A industries as specified in the Industrial Policy Resolution of 1956 (see Appendix I for details) representing basic, critical and strategic industries which are exclusively reserved for the government for establishing new units.
- B = All "other" industries set up (by or with the help of) or nationalised by the government and owned wholly or partly by the government including, for example, public utilities and other enterprises (usually core industries as listed in Appendix III). New units in this subset will be established at the initiative of the government.
- G = The public (or government) sector = $A \cup B$
- L₁ = Those industries as specifically listed in Appendix II (including some core industries) in which the large enterprises (covered under M.R.T.P. Act) will be encouraged along with others, to enter usually requiring heavy investment of over Rs.5 crores in fixed assets. All foreign companies are included in this subset.
- L₂ = Industries in which all "other large enterprises" (who do not fall under the M.R.T.P. Act) will be allowed to enter which will usually require fixed investment above Rs.5 crores.
- M = Industries usually open to new middle level entrepreneurs in the private sector constituting the Middle sector (not belonging to large enterprises) requiring total investment in fixed assets upto Rs.5 crores.
- J = Joint Sector = $G \cap (L_1 \cup L_2 \cup M)$
- C = Cooperative sector usually for agro-based industries for processing agricultural products and for units producing and distributing mass consumption goods (normally not open to large enterprises).
- S = Industries reserved for the small scale entrepreneurs in the private sector requiring investments in fixed assets below Rs.7.5 lakhs and hence not subject to licensing.
- R = All remaining industries with private entrepreneurs in the unlicensed sector with units requiring fixed investment of less than Rs.1 crore and foreign exchange requirements of less than 10 per cent of fixed investment.
- L = A* (Complement of A) as an exceptional case for domain for setting up primarily export-oriented units (exporting 70 per cent of their output) by the large enterprises.

Leaving apart the problem of decision making on dominantly export-oriented industries where the large enterprises can enter any industry open to the private sector including those reserved for small scale units, our market segmentation **study** would be concerned with the list of 19 categories of industries given in Appendix II which have specifically been mentioned in the new industrial licensing policy announced in February 1973 where the government would entertain and welcome applications from large industrial enterprises in consonance with the objectives of national economic policy set in the Fifth Five Year Plan. We have grouped these 19 categories of industries into 11 major industries as shown in Table 1 along with the market segmentation analysis of these **industries** using the three criteria of potential growth rate of output, profitability and degree of price control on output as mentioned earlier.

For the purpose of the segmentation of industries on the basis of the growth rate criterion, we have used the information on the target rates of growth as published in the official paper on the Approach to the Fifth Five Year Plan published by the Planning Commission of India. We have arbitrarily used a cut-off rate of growth of 10 per cent per annum for dividing the industries into high growth (HG) and low growth (LG) industries.

While using the profitability criterion, we have segmented the industries into high profit (HP) and low profit (LP) segments on the basis of a cut-off rate of 10 per cent since this rate represented the average rate of return on networth on all the industries in India during the last two years for which data is available.

Finally, we have labelled those industries in which governmental price control on the selling price of the final output is imposed as highly-controlled (HC) segment and those on which there is no such price control as less-controlled (LC) segment of industries.

Table 1

SEGMENTATION ANALYSIS OF INDUSTRIES NORMALLY OPEN FOR ENTRY BY LARGE ENTERPRISES IN INDIA FOR THE FIFTH FIVE YEAR PLAN PERIOD

Industry	Annual growth rate of output (%)	Profit After Tax Net Worth (%)	Segment
1. Special Steel	10.0	5.6	HG-LP-HC
2. Nonferrous metals and their alloys	14.0	14.7	HG-HP-HG
3. Industrial Plants and machinery	16.0	8.0	HG-LP-LC
4. Electrical equipment and electronic equipment	12.0	11.0	HG-HP-LC
5. Small Ships	10.0	11.7	HG-HP-LC
6. Commercial Vehicles	7.0	7.9	LG-LP-HC
7. Agricultural Machinery (Tractors, Power tillers etc.)	9.0	7.3	LG-LP-HC
8. Chemicals (Inorganic, Organic, others)	12.0	12.8	HG-HP-LC
9. Drugs and Pharmaceuticals	5.3	17.4	LG-HP-HC
10. Paper and Paper Products	9.9	14.0	HG-HP-HC
11. Cement	8.3	11.7	LG-HP-HC

Note: The estimates of growth rate of output of above industries are based on the target rates for the broad industry groups formulated by the Planning Commission as published in the official paper on Approach to the Fifth Five Year Plan. The estimates of profitability are the average derived as averages of the rates prevailing in 1969-70 and 1970-71 for these industries by splicing information provided in the Reserve Bank of India Bulletin, September 1972 and in the Economic Times (Bombay) dated November 30, 1972.

The market segmentation analysis of the kind that we have presented in Table 1 above would serve as an aid to decision making by the top management for considering the addition of a new product to the product line of the large enterprise. We have assumed that it would be rational for the top management to normally prefer the high growth-high profit-less controlled (HG-HP-LC) segment of industries for entering into a new industry unless there are other considerations in the objectives of the enterprise (that reflected in the three criteria which we have chosen here for illustration). Table 2 below presents the information contained in Table 1 in a more convenient form for review by the top management of a large enterprise for the purpose under consideration.

Table 2

INDUSTRIES OPEN TO LARGE ENTERPRISES IN INDIA CLASSIFIED BY SEGMENTATION
ANALYSIS FOR THE PERIOD OF FIFTH FIVE YEAR PLAN

<p>I. <u>High Growth-High Profit-Less Controlled (HG-HP-LC) Industries:</u></p> <p>(i) Electrical equipment and electronic equipment</p> <p>(ii) Chemicals</p> <p>(iii) Small Ships</p>	<p>II. <u>High Growth-High Profit Highly Controlled (HG HP HC) Industries:</u></p> <p>(i) Non-ferrous metals and their alloys</p> <p>(ii) Paper and paper products</p>
<p>III. <u>High Growth-Less Profit-Less Controlled (HG-LP-LC) Industries:</u></p> <p>Industrial Plant and machinery</p>	<p>IV. <u>High Growth-Less Profit-Highly Controlled (HG LP HC) Industries:</u></p> <p>Special Steel</p>
<p>V. <u>Low Growth-High Profit-Less Controlled (LG-HP-LC) Industries:</u></p>	<p>VI. <u>Low Growth-High Profit-Highly Controlled (LG-HP-HC) Industries:</u></p> <p>(i) Cement</p> <p>(ii) Drugs and Pharmaceuticals</p>
<p>VII. <u>Low Growth-Low Profit-Less Controlled (LG-LP-LC) Industries:</u></p>	<p>VIII. <u>Low Growth-Low Profit-Highly Controlled (LG-LP-HC) Industries:</u></p> <p>(i) Commercial Vehicles</p> <p>(ii) Agricultural machinery</p>

INTER-RELATIONSHIP BETWEEN MACRO PLANNING AND ACTION AT MICRO LEVEL

The interrelationship between macro-economic planning and micro decision making needs to be stressed. As Chamberlain and others have pointed out, the firm has social utility which the government can regulate in the pursuit of social objectives.¹³ But the relationship between the firm and the government is not one-sided. The firm's actions in a mixed economy ultimately determine whether the social objectives (including the objective of rapid economic growth) set by the government are likely to be achieved or not and to what degree. To quote Chamberlain again, this is so because to "some extent government can specify the firm's activities by legislation and regulation. But to a larger extent it can only secure the behaviour it wants by appropriate inducements, usually of a fiscal or credit nature. The firm retains areas of independence of action which the government cannot invade without jeopardizing the social values flowing from the existence of numerous points where change can be initiated".¹⁴ We may add here that instituting changes in social system are awfully slow in a political system governed by democracy as prevails in India.

Samuel Paul has pointed out that the interface between macro planning and micro level decision making has remained a "neglected area"

¹³ Chamberlain, op.cit., p.208

¹⁴ Chamberlain, op.cit., pp.207-8

in India. This he calls the failure of 'micro planning' and distinguishes it from the problems of aggregative planning which is concerned with basic national goals and broad strategy in micro terms.¹⁵ The failure on the front of this 'micro planning' can be held responsible, among other things, for the relatively poor performance of the Indian economy in terms of the attainment of the objective of rapid economic growth.

V

Conclusion

We conclude that the analysis of external environment is crucial to the process of strategic planning of a large and diversified industrial enterprise in India where the governmental policy is acting as a dominant force in shaping the future of such enterprises with the twin objectives of accelerating the rate of economic growth and reducing the degree of concentration of economic power in the economy. There are cases where there is a clash between these two objectives which leads to contradictions in governmental policy. The task of environmental analysis for corporate planning with a horizon of next five years (or so) becomes quite difficult in view of the frequent changes in governmental policies and regulatory conditions. Yet it is necessary to formulate an operational framework for environmental analysis for a systematised exercise at strategic planning. We have presented in this paper a list of the selected

¹⁵ Samuel Paul, "Micro Planning: The Neglected Interface", Economic & Political Weekly (Bombay), Vol. VI, No.9, Review of Management, February 27, 1971, p. M-5.

economic and regulatory conditions which have been empirically found to have a significant impact on the business operations of a large and diversified industrial enterprise in India. We have also proposed and illustrated the use of an operational framework for environmental analysis for providing an input to the top management of a large enterprise for decision making with reference to proposals for adding a new product to its existing product line(s). We have pointed out that the importance of continuously updating relevant information on external conditions supplemented by practical experience of other companies in similar position cannot be exaggerated for making the exercise more realistic. Finally, we conclude that the significance of the inter-relationship between macro-planning and micro decision making should be sufficiently realised by the policy makers in the country to avoid the failures on account of 'micro planning' for the achievement of objectives of national economic policy.

APPENDIX I

Schedule A (as defined under Industrial Policy Resolution, 1956)

1. Arms and ammunition and allied items of defence equipment.
2. Atomic energy.
3. Iron and Steel.
4. Heavy castings and forgings of iron and steel.
5. Heavy plant and machinery required for iron and steel production, for mining, for machine tool manufacture and for such other basic industries as may be specified by the Central Government.
6. Heavy electrical plant including large hydraulic and steam turbines.
7. Coal and lignite.
8. Mineral oils.
9. Mining of iron ore, manganese ore, chrome ore, gypsum, sulphur, gold and diamond.
10. Mining and processing of copper, lead, zinc, tin, molybdenum and wolfram.
11. Minerals specified in the Schedule to the Atomic Energy (Control of Production and Use) Order, 1953.
12. Aircraft.
13. Air transport.
14. Railway transport.
15. Shipbuilding.
16. Telephones and telephone cables, telegraph and wireless apparatus (excluding radio receiving sets).
17. Generation and distribution of electricity.

APPENDIX II

"Core" and "Heavy" Industries open to "Large Industrial Houses"

(as under MRTP Act 1969)

(Note: The classification of industries follows the first schedule to the Industries (Development and Registration) Act, 1951. Items of manufacture reserved for the public sector under schedule A to the industrial policy resolution, 1956 or for production in the small scale sector as may be notified from time to time will be excluded from the application of the list).

1. Metallurgical industries: ferro alloys; steel castings and forgings; special steels and non-ferrous metals and their alloys.
2. Boilers and steam generating plants:
3. Prime movers (other than electrical generators): Industrial turbines and internal combustion engines.
4. Electrical equipment: equipment for transmission and distribution of electricity; electrical motors; electrical furnaces, X-Ray equipment, and electronic components and equipment.
5. Transportation: mechanised sailing vessels up to 1000 Dwt; ship ancillaries; commercial vehicles.
6. Industrial machinery.
7. Machine tools.
8. Agricultural machinery: tractors and power tillers.
9. Earthmoving machinery.
10. Industrial instruments: indicating, recording and regulating devices for pressure, temperature, rate of flow, weights, levels and the like.
11. Scientific instruments.
12. Nitrogenous and phosphatic fertilisers falling under inorganic fertilisers.

13. Chemicals (other than fertilisers): inorganic heavy chemicals; organic heavy chemicals; fine chemicals, including photographic chemicals; synthetic resins and plastics; synthetic rubbers; man-made fibres; industrial explosives; insecticides, fungicides, weedicides and the like synthetic detergents and miscellaneous chemicals (for industrial use only).
14. Drugs and Pharmaceuticals.
15. Paper and pulp including paper products.
16. Automobile tyres and tubes.
17. Ceramics: refractories, furnace lining bricks - acidic, basic and neutral.
18. Plate glass.
19. Cement products: portland cement, asbestos cement.

APPENDIX III

Core Industries

The list of "core" industries issued by the Government of India includes the following industries:

1. Agricultural inputs:
 - a) Fertilizers
 - i) Nitrogenous
 - ii) Phosphatic
 - b) Pesticides (basic chemicals only)
 - c) Tractors and power tillers
 - d) Rock-Phosphate and Pyrites
2. Iron & Steel:
 - a) Iron ore
 - b) Pig iron and steel
 - c) Alloy and special steels
3. Non-ferrous metals:
4. Petroleum:
 - a) Oil exploration and production
 - b) Petroleum refining
 - c) Selected petro-chemicals
 - i) Integrated petro-chemicals complexes
 - ii) D.M.T.
 - iii) Caprolactum
 - iv) Acrylonitrile
 - v) Synthetic rubber

5. Cooking Coal
6. Heavy industrial machinery (to be specified)
7. Ship-building and dredgers
8. Newsprint
9. Electronics (selected components, testing and control equipment, wireless and micro-wave equipment)