Regional Planning represents the strategy for growth and change at the sub-national level. This is a phrase whose use has been marked by varied definitions on the unit of area under consideration. Development Planning specific to a relatively small and homogenous geographical area, has been a part of our planning strategy almost from the first plan. We have expressions of planning at the sub-national level in various development programmes and these schemes and programmes are found to be disjointed and are formulated without a definite Developmental Strategy or Policy frame.

At the policy level, the Industrial Policy of 1956, within the ambit of the Second Five Year Plan, was the first attempt to formulate a definite strategy for Backward Area Development. Two formulations of this Strategy can be identified at the level of Sub-regional Planning. At the sectoral level, this strategy follows the export led industrial growth, and, at the spatial level, in the frame of industrial
growth centre approach, resulting in space specific programmes like industrial estates and a set of industrial incentive policy packages.

Experiences indicate that this strategy has not been fully successful to realise its objectives of regional development. By the mid 70's it had become clear that, far from being the path to development, the strategy of accelerated industrialisation had generated and was continuing to generate and reinforce economic, social and spatial structures that confounded the rhetoric of national objectives.

A number of reasons have been forwarded for the failure of the desired regional "spin-offs". It is held that traditional development strategy with its accent on accelerated industrialisation and aggregate growth has been unable to spread the benefits of development in a region. The result observed, by many, is that this growth strategy for regional development, against its hope of eliminating disparities has set in motion the reverse process of polarisation. Disparities associated with all facets of development have indeed been pronounced. The call is out for a new development approach, which will ensure the "spread effects" of the development activities and participation of the majority people in the developmental process.

Available approaches for planning at the sub-national
level discuss major elements of regional planning; but they have yet to be operationalised. While the need to integrate the major sectors like, Agriculture, Industry and Household sector has been stressed upon, the available studies have not provided an operationally adequate methodology for their integration. The present study is a modest attempt in this direction of Regional Planning and aims to develop an integrated planning model for a backward District of Gujarat, Surendranagar District.

The basic postulate of the present study is that, the pre-conditions for the spread effects of the developmental benefits over space as well as across sections of people are an increase in the level of regional income and its better distribution. For regional development of a backward region, where mineral and industrial resources are limited, agriculture sector plays the role of Lead sector. An important aspect of the technological development strategy for agricultural development is the extent of irrigation. We have observed earlier that, one of the basic factors which contribute for the variation of the agricultural development across sub-regions of the District, is the level of irrigation as identified through the Composite Development Index method of regionalisation (Ch.III.3) indicating that irrigation can be considered as a strategy for Agricultural Development. Again this observation has been supported by the contextual irrigation
potentiality of underground water (Ch.III. 1) and the feasibility of different other sources of irrigation potential exploitation in the region (Ch.IV, Appendix: 4.1).

If agricultural led prosperity is realised through the irrigation strategy, local and regional industries which serve regional markets can be activated. Once the inter-sectoral linkage between the agriculture sector, industrial sector; primarily the residential industrial sector, and the regional household sector is established, any developmental activity can be expected to realise the assumed "spread effects" and the "linkage multipliers" (Ch.II).

In the event of agricultural prosperity, large scale investment on land by the rural and urban rich can be expected, transforming the non-owning cultivating peasant into landless and reducing the cultivating unit of the small owner-cum-tenant cultivator. We assume that adequate administrative steps for controlling land transfers can be taken within the existing land relations.

The basic characteristics of the region is that, it is devoid of significant natural resources and the talukas (sub-regions) indicate heterogenous levels of development (Ch.III.3). This heterogeneity is due to the taluka-wise variation in geographical characteristics; where talukas like Dhrangadhra and Chotila are relatively more resource endowed (Ch.III. 1);
in the demographic characteristics, where urban population in Wadhwan and Dhrangadhra talukas are as high as 60% and 36% respectively as compared to Muli taluka which is completely rural (Ch. III. 2); in agricultural characteristics, where Muli taluka has a cropping intensity of 106.30 as compared to Chotila which has a cropping intensity of 100.68, and growth in the level of irrigation is significant in Dhrangadhra and Sayala with 10.66% and 6.53% (compound per annum) as compared to Desada where growth in the level of irrigation is declining (-13.53) (Ch.IV. 1); and in the industrial base, where 54.81% of the industrial units are located in two urban centres, i.e., Wadhwan and Surendranagar (Ch. V.0). This has indicated that the sectoral potentiality for regional development need to be fully explored.

The potentiality of the agricultural sector in the study region to generate the regional income and the required additional regional employment is limited even under the optimistic scenario of the highest level of irrigation. Under situations of high technological development, the agricultural sector will be able to stabilise the employment of already underemployed agricultural labourers and the scope for additional employment generation is limited (Ch.IV. 3).

We have indicated that Surendranagar District needs 0.46 lakhs of man years of employment by 1982-83 (Ch.III. 2) and with the highest irrigation scenario of 21.02 percent of
the gross cropped area irrigated the agricultural sector will be able to generate only an additional 4129 man years of full employment, indicating that the employment in agriculture does not increase with the growth in agricultural income, i.e., while, agricultural employment increases by 4.35 percent for the highest scenario of irrigation, agricultural income increases by 19.75 percent (Ch.IV. 3).

The basic factor that constraints the agricultural sector to generate adequate regional employment is the static nature of the regional agricultural economy. The static nature of the regional agricultural economy has been indicated by: the increasing trend of land under fallow (Ch.IV. 0), low cropping intensity of 102.10, low level of irrigation (7.02%), insignificant growth of gross cropped area (0.15% per annum between 1968-1978), declining trend in the area irrigated (-0.66% per annum), declining trend of agricultural output growth (-0.45% per annum) (Ch.IV. 1) and the highly skewed distribution of land and crop income; where, sub-marginal and marginal farmers together share 46.71% of the land holdings, operate 13.36% of the land and generate 18.22% of the net crop income and large and very large farmers together control 31.43% of the land holdings, operate 69.45% of the land and generate 52.87% of the net crop income (Ch.IV. 2). The static nature of the agricultural economy can also be explained through the significant contribution of wage income and income from livestock (14.03% and 12.02% respectively) to the regional per capita monthly farm income, which itself is
at a low level of Rs.46.60 (Ch.IV. 2). Incidentally, the practice of mono-cropping pattern, i.e., cotton which shares 54.92% of the gross cropped area, due to irrigation constraints also indicates the phenomenon of the static nature of the agricultural system. Again, the analysis of the cropping pattern indicates that cotton crops will dominate in future with its area growth of 3.11% per annum, positive yield growth and 10.89% increase in cotton prices, between 1960-78 (Ch. IV. 1).

It is observed that the green revolution did not make any significant impact on the district agricultural production. The principal factor pulling down the growth rate of agricultural output was the declining trend in the growth of cropped area. But in the absence of technological change, the growth in the yield rate has substantially stepped up during 1960-65 to maintain the growth of output, whereas in the subsequent decade, despite technological change, the improvement in the growth of yield rate turned out to be small to neutralise the effect of slow down of area expansion on the output changes. This phenomenon of output changes has indicated the need to decompose the output growth and it has been analysed through a Decomposition exercise for the output changes between 1960-1978. This analysis has indicated that 102.51% of the change in output per hectare is due to the productivity effect and this significant contribution of productivity effect has been observed in the Pre-green
The growth and distribution of agricultural income and employment pattern with respect to the different levels of irrigation development shall indicate interesting insights into the distributional aspects of agricultural development. This aspect of agricultural income distribution across farm sizes and agricultural labourers has been analysed through a methodology which matches the technical and household definitions of land holdings. It is observed that while the agricultural income has grown positively with various levels of irrigation, changes in the crop income across farm households have not been positively affected. While the regional per capita monthly income has grown by 19.75% for the highest scenario of irrigation strategy, the per capita income of sub-marginal farm households has increased by 14.06% and that of very large farm households has increased by 19.52 percent (Ch.IV. 3). This behaviour of crop income across farm sizes can be explained by the irrigation ratio, crop mix and the yield differential of irrigated and unirrigated crops in which the sub-marginal and marginal farmers have relatively less leverage.

The manoeuvrability of the agricultural sector to generate the required regional employment was found to be limited and this has indicated the need to explore the industrial sector potentiality for regional development. The analysis of the
industrial sector has indicated that as compared to the general view of the limited scope for industrial development in a backward region, if local demand potentiality can be exploited through the domestic technology and by stimulating the regional production to meet the regional demand, the region will be able to meet the required regional employment.

It has been observed that under the assumption of zero import leakage to the regional industrial system, the regional industrial output can be expanded by 284.32% and it will generate an additional employment of 0.46 lakhs of man-year by 1982-83. This industrial output expansion will also lead to a significant inter-sectoral linkage, leading to a high requirement of agricultural output, which is about 13 times more than the base year demand (Ch.VII. 2), further leading to a high linkage multiplier. As a coincidence, the additional labour requirement of industrial output expansion, under the scenario of no import leakages, fully matches with the employment requirement of the region.

The industrial output projection has been done based on the projected regional expenditure. The regional expenditure has been projected for 1982-83 on the basis that the regional per capita expenditure will grow at the rate of 1.08% compound per annum. This expenditure growth rate is based on the agricultural income growth generated from the highest scenario of irrigation development. The projection analysis of regional
expenditure has indicated that the regional demand for industrial products is significant, i.e., about 59.14% of the regional expenditure is spent on industrial products including processed food items (14.66%), textile (23.41%), durable items (15.87%) and others like leather products and chemical products (6.20%). The projection of regional expenditure has indicated that a 1.08% growth in per capita expenditure will increase the regional expenditure to Rs.12,247.67 lakhs, registering an increase from the base year by 7.49% (Ch.VI. 6).

The study on industrial output expansion possibilities has been presented with respect to four variants of the Regional Partial Input-Output Model. These variants indicate various levels of import leakages to the system. Variant-I of the I-O Model, which allows complete import leakages, is in complete contrast to Variant-IV which does not allow any kind of import leakages, either at the technological level or at the final demand. The I-O variant analysis indicates the levels of potentiality for the regional industrial output expansion. We have observed that the region can realise the full impact of output expansion and meet the employment requirements, provided the import leakages can be controlled. The study indicates that, if import leakages are allowed in the system, about 74% of the additional labour requirements of the industrial potential output expansion will be generated in regions outside the District (Ch.VII. 2).
It is observed that the existing industrial units have weak forward and regional linkages and the forward and backward linkages with the local industries are insignificant (Ch.VII. 1). It is to be noted that the extent of import leakages is so high that 94% of the intermediary inputs and 69.08% of the final demand are being imported from outside regions (Ch.VII. 2). Appreciating fully the limited manoeuvrability of the regional system to control import leakages, the study indicates the extent of regional industrial development potentiality and provides various alternatives to realise this potentiality.

The study on industrial output expansion under different variants of the I-O model indicates that textile, metal products, machinery, clay products and food processing industries have relatively more growth potentiality in the region (Ch.VII. 2). The employment intensity indicators like labour/output (direct as well as direct plus indirect) and employment multiplier indicate that these industries are labour intensive (Ch.V. 0 & Ch.VII. 3). The industrial sectoral optimum output which maximises the regional employment has been identified through a linear programming exercise (Ch.VII. 4).

The entrepreneurial development perspectives also indicate that textile, metal, food processing, non-ferrous metal and machinery industries have relatively more potentiality in the
The entrepreneurial study has also indicated that due to the availability of backward area industrial incentives, significant external investment in the region can be expected in future. The entrepreneurial perspectives clearly indicate that regional entrepreneurial potentiality can be exploited by formulating appropriate programmes and policies and by extending necessary institutional assistance.

The present study thus concludes that even in a backward region adequate development potentiality exists and an agricultural-led industrial development approach with irrigation-cum-regional demand oriented development strategy is one of the best to promote regional development.