

DEVELOPING THE INTER-METROPOLITAN PERIPHERY

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The concepts presented in this paper were developed while the author served as a consultant to PLAN Associates, Pretoria.

'n Verkorte oorsig van nasionale en streeksontwikkelingsbeleid word gegee.

Die wydverspreide patroon van en die aantal ontwikkelingspunte word bevraagteken: hoofsaaklik in die lig van tydsbestek, die beperkte menslike hulpbronne en die huidige verstedelings-

tendense. Voorstelle met betrekking tot 'n alternatiewe beplanningsbenadering en -strategie vir die ontwikkeling van industriële groeipole in die inter-metropolitaanse soomgebiede word gemaak.

1. INTRODUCTION

The recent division of South Africa into eight development regions is part of the effort to establish a coherent regional development strategy by way of close cooperation between all states concerned (De Villiers, 1981). The general strategy characterizing each of the regions is based on the promotion of a hierarchical order of functional areas and industrial nodes stemming from the well-known growth centre strategy. The hierarchical structure of growth poles, growth centres, growth points, and service centres which is a result of the metropolitan-dominated spatial structure of South Africa is aimed at achieving a more equal distribution of economic activities in the country.

It has, however, already been argued elsewhere (Fair, 1975) that this strategy is applicable mainly to the peripheral areas of advanced white South African areas because of the country's relatively small white population, small internal market, and large distances. Thus, the success of a growth centre strategy in South Africa may apply to those areas where there is considerable potential for foreseeable growth. If we accept this argument, we may consider the eleven deconcentration points already identified in South Africa as promising development nodes. However, the South African Decentralization Board has also proclaimed, or approved, 53 industrial development points, 20 of which are in the R.S.A. and 33 in the homelands.

The dispersed pattern of too many growth points raises doubts as to whether such a strategy can be implemented successfully in the foreseeable future, especially when taking into account the limited human resources and the ongoing urbanization trend in the country.

This paper therefore puts forward for consideration a few guidelines for the implementation of the national development strategy, and proposes an alternative planning concept for developing industrial growth points in the inter-metropolitan periphery of South Africa.

2. SUGGESTIONS CONCERNING THE IMPLEMENTATION OF THE NATIONAL DEVELOPMENT STRATEGY

In spatial terms, economic development is generally seen as a process in which the region under consideration progressively replaces its centre-periphery structure with a single system of cities extending throughout its economic space (Friedmann, 1973). This can generally be achieved when a town promoted as a growth centre reaches its "take-off" stage and the developmental effects (or alternatively named the "trickle down" effect) are spreading out. Many resources, both human and economic, must accordingly be directed towards the growth centre. When considering the rather limited white human resources in South Africa and the continuous trend

towards overcrowding in the major urban areas, it simply does not seem reasonable that the real progress can be achieved by promoting a dispersed pattern based on so many growth points.

A comprehensive economic development programme must include the following elements: provision of land for industrial and commercial expansion; infrastructure capacity sufficient to meet needs of industrial and commercial undertakings; amenities and a business environment attractive to the private sector; a skilled labour supply adequate to meet both current and future demands of expanding local industries or new industries moving to the area; modernization of industrial, commercial, and residential facilities and structures to provide an adequate physical environment; programmes and incentives that reduce front-end costs and risks, and alleviate cash flow problems, so that private investment will be profitable and sound; and provision of capital at a reasonable cost for land, plant and equipment. The provision of all these elements simultaneously at many points in space seems far from feasible in South Africa. Instead, concentrating on one or two carefully selected locations which would serve as models for later imitation in other locations seems more manageable and realistic as a starting point.

As seen in Figure 1, many of the officially proclaimed industrial points in South Africa are located in sparsely populated

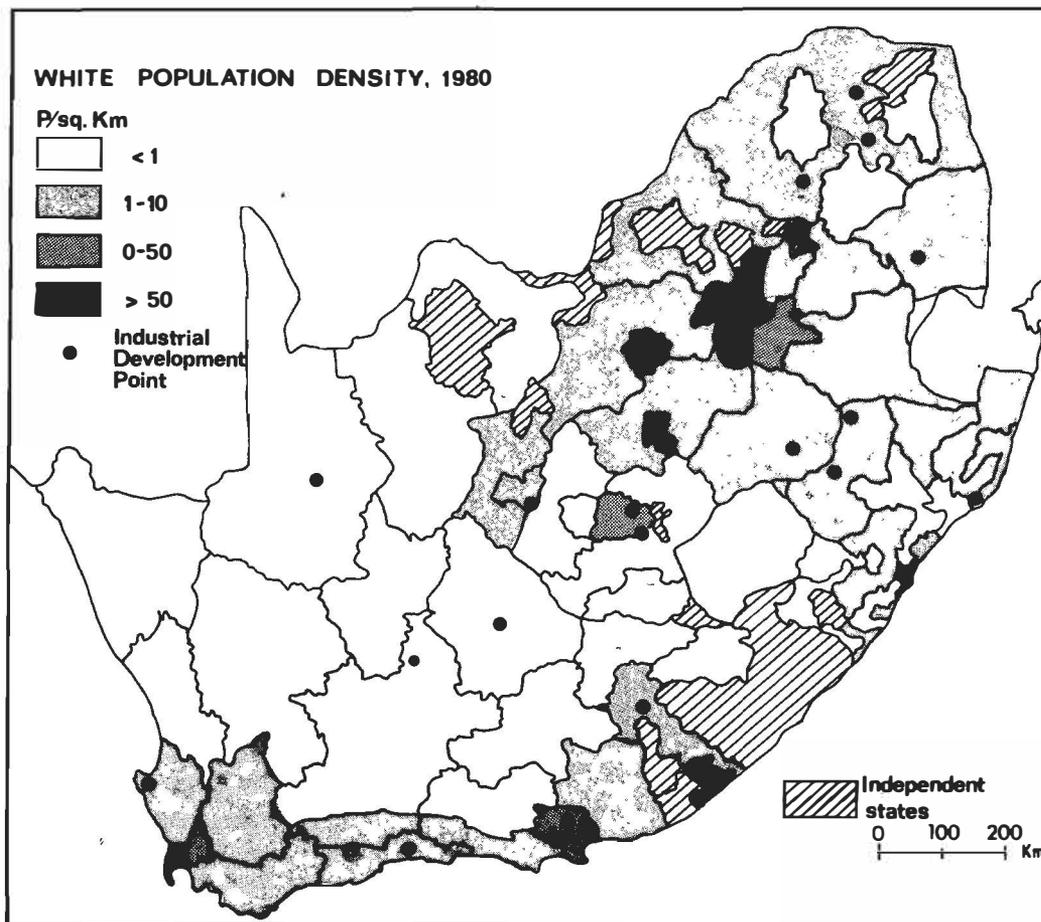


Figure 1

areas as well as in the peripheral economic space of the country. Many studies have already demonstrated that the development of sparsely populated areas should take place in stages, emanating from a strong economic core (e.g. Gradus and Stern, 1980). Efforts to "plant" a growth point away from a national or regional economic core, unless it has unique unexploited locational advantages like mineral deposits or an exceptionally accessible position, have proved fruitless. One should also take into consideration the public's negative attitude towards moving into a low serviced new area particularly where other more attractive opportunities exist elsewhere. Migration into sparsely populated areas as well as to any other area is either forced or voluntary. Forced migration, apart from that caused by military activity or unstable security conditions, is generally a result of economic and/or housing or health reasons at the origin. Voluntary migration usually occurs when the expected utility at the new destination is higher than at the origin. The utility is not necessarily measured in economic terms but can be measured in social or

cultural terms. Migration motivated by ideology is an example of the latter and that for new towns for the elderly is an example of migration partially motivated by social reasons. The promotion of economic development should, however, involve voluntary migration which will ensure a higher utility at the destination with respect to satisfying the widest range of expectations. This implies that metropolitan peripheries are potentially more promising than regional or even national peripheries. Moving away in steps from the metropolitan areas rather than starting with a long distance "jump" ensures a more cohesive spatial structure.

Incentives to industrialists are obviously necessary but not enough. An innovative type of settlement must be developed to allow for new initiatives and to offer challenging opportunities. The economic organization and the life framework are generally similar in most places. A move to "just another place" and just for the possibility of marginal financial gains does not seem to be traded off in South Africa by the efforts involved in such a move. Established families will most

probably not find this option attractive. Starting again in a new place is not a common phenomenon in South Africa's relatively immobile society. Even in countries with high internal rates of migration, like the U.S.A. for example, careful and innovative planning is needed to promote economic growth in stagnant towns. A new planning concept offering more than just a new job is therefore needed in order to apply this option within a national development strategy.

In summary, the following suggestions should be considered in the implementation of the national development strategy:

- It should start with very few carefully selected industrial points or, alternatively, growth regions (as are elaborated later on). A successful model will encourage similar development in other locations.
- Priority should be given to the metropolitan peripheries rather than to the more sparsely populated areas. The implementation should thus be carried out in stages from the economic core to the periphery. The centre-periphery structure characterizing the

South African space-economy (Bard, Davies and Fair, 1970; Browett and Fair, 1974; Fair, 1982) will change gradually towards a more balanced structure of central places.

- Innovative planning should be applied in the establishment of the growth points in order to create advantages beyond mere economic ones.

3. THE PHENOMENON OF SEMI-URBAN CLUSTERS

For many years the tendency among planners was to encourage the concentration of investments in one location in order to promote the development of a single spatial unit into a regional growth centre (Semple, Gauthier and Youngman, 1972; Shachar, 1971; Berry, 1973; Stöhr, 1974). Recently, the appearance of many small urban clusters in the inter-metropolitan peripheries of Western countries (Fisher and Mitchelson, 1981; Taaffe, Gauthier and Maraffa, 1980) has attracted the attention of many urban and regional specialists since the phenomenon presents a deviation from the normative central place model (Burton, 1963). The phenomenon is part of the "urban field" process (Friedmann, 1978) now evidenced in several developed countries, which reduces or even stops metropolitan growth and accelerates population growth in the rural peripheries (Krakover, 1982; Phillips and Conzen, 1982).

Studies of urban clusters have examined the conditions in which many small urban entities may stimulate the diffusion of economic development into the inter-metropolitan periphery (Kipnis, 1982; Chapin and Weiss, 1962). In other words, they examined the question of whether the inter-metropolitan gap may be inhabited more rapidly with numerous small urban communities than through the spread effects of an inter-metropolitan growth centre. The conditions found in the U.S.A., for example, as necessary to implement the small urban clusters concept rather than the growth centre concept in the development of the inter-metropolitan periphery, were improvements in transportation and the development of high speed information transfer facilities (Scott, 1982). The structural and locational shifts in the American economy which have been accompanied by dispersal of

even marketorientated service employment, are explained by the creation of new business climates and the falling costs of information transfer (Fisher and Mitchelson, 1981). The new small urban clusters are thus seen as fattening cores for new economic initiatives (Krakover, 1982). The introduction of small urban clusters may suggest that the existing hierarchy of cities may be breaking down as non-metropolitan areas become a set of expanding, interdependent centres with horizontal linkages and with reduced dependence on high-order centres (Hage, 1979).

The spread of the semi-urban clusters may also have a social motivation. The inter-metropolitan areas in Israel, for example, are experiencing such a rural renaissance, with semi-urban settlements, sometimes referred to as "industrial villages", being rapidly established there (Newman, 1984; Hasson and Gosenfeld, 1980). Apart from the economic motive for this settlement trend, certain population groups are motivated into establishing socially homogeneous communities based on a high life style and environmental quality. This population is active both in the design and the management of its settlement region. Those migrating to these semi-urban areas are basically families in the middle age group (30-45) where both husband and wife are skilled and willing to be economically active. Their wish is to develop a dynamic economic system in the region, in many instances in the quaternary sector. They are also ready in the first stage of development to accept long distance travel for commercial and service needs.

The semi-urban development in the inter-metropolitan areas deserves further examination as to its applicability as an alternative or an additional concept to achieve a more equal distribution of economic activity in South Africa. The following section presents such a concept.

4. A PROPOSAL TO DEVELOP SEMI-URBAN CLUSTERS IN SOUTH AFRICA

The new form of urbanization presented in the previous section offers a new development concept which may be motivated in South Africa. The following proposal, based on this form, must however be considered with regard to

the following assumptions:

- (i) A growth point can reach its "take-off" stage and promote development in its adjacent hinterland only if there is a sufficient threshold to support high quality services. Studies in Israel, for example (Berler, 1976), indicated that in order to achieve this end, the growth point must have at least 50 000 inhabitants. An examination of the 1980 white population-based rank size distribution of South African cities reveals that very few non-metropolitan towns have reached this stage. The 1970-1980 average annual growth of the South African population is only 2,21 percent in the metropolitan areas and 0,61 percent in the rest of the country. The national annual average growth, based on statistical regions data, is only 1,05 percent. If this growth rate continues, the white population will not be sufficient to support a significant development of twenty growth points in the country.
- (ii) Based on past migration trends in white South Africa, no mass movements of population towards the newly proclaimed growth points are expected in the short and even in the medium range. The existing trend of population migration towards the more urbanized areas will continue.
- (iii) Based on migration theories and Western world experience, the most promising potential of migrants to newly growing regions are young and middle-aged skilled people who have not yet developed roots in one particular place. University and college graduates should be seriously considered in this category.
- (iv) If properly presented, a challenging concept can attract young people to these new areas.

The proposed concept is aimed towards the development of a growth region, instead of a growth point, based on several semi-urban high technology industrial communities in the vicinity of an existing small or medium sized town. A similar concept was recently analyzed and proposed for the Israeli Negev (Darin-Drabkin, 1979). Development effects will operate in the opposite direction to those anticipated in a growth

point development, as presented in Figure 2. Resources allocated to several nodes in the urban periphery and sectorial planning decisions will stimulate growth in a single centre (Figure 2, stage 1). The expansion of the urban periphery as anticipated in the second stage will stimulate regional growth impulses to the regional town. Thus, the regional town may turn into a growth point as a result of growth and development in the region and not as a result of regional polarization and peripheral erosion. In stage 3, a two-way interaction will be practised between the regional town and its semi-urban periphery. Growth impulses will be transmitted in both directions, leading towards an integrated system of towns, villages, and industrial complexes serving as a single growth region.

The success of this concept depends on the nature of the proposed communities and, moreover, on the creation of an attractive development atmosphere and its implementation procedure. The growth region and its proposed communities should be based on the following principles:

- The growth region should be developed in an area that already has a central town (or towns) as a core but investments and any other economic assistance should be directed to the area rather than the core.
- The selected region should be located in an inter-metropolitan periphery, preferably in reasonable proximity to one or more major metropolitan areas.
- The communities in the region should be characterized by an urban life-style within a rural environment.
- The communities should be based primarily on high technology industry and quaternary sector activities.
- Industries to be promoted should be of a sophisticated nature and neutral in locational terms where raw material and final product transportation costs are negligible in the expenditure budget. Electronics, computer software development, optics, and medical engineering are only a few examples which can be so categorized.
- The industries promoted should be skilled labour intensive, producing high value products, and be environmentally compatible.
- The communities should be socially and economically exclusive, but motivated by common ideas and interests.
- The communities should be located in an attractive environment and characterized by high physical standards.
- A good communication system should connect the communities with the nearby metropolitan area(s). A high speed transportation mode may be integrated into this system.
- Attention should be paid to developing a cohesive system of social and cultural activities.
- The economic programme for the communities should take into account the involvement of the female labour force in the production cycle.
- A research institute and/or a university branch should be seriously considered so as to provide the research and development back-up to the sophisticated industries in the region.
- The settlers should be intensively involved in the design and management of the region.

DEVELOPMENT STAGES OF A GROWTH POINT AND A GROWTH REGION

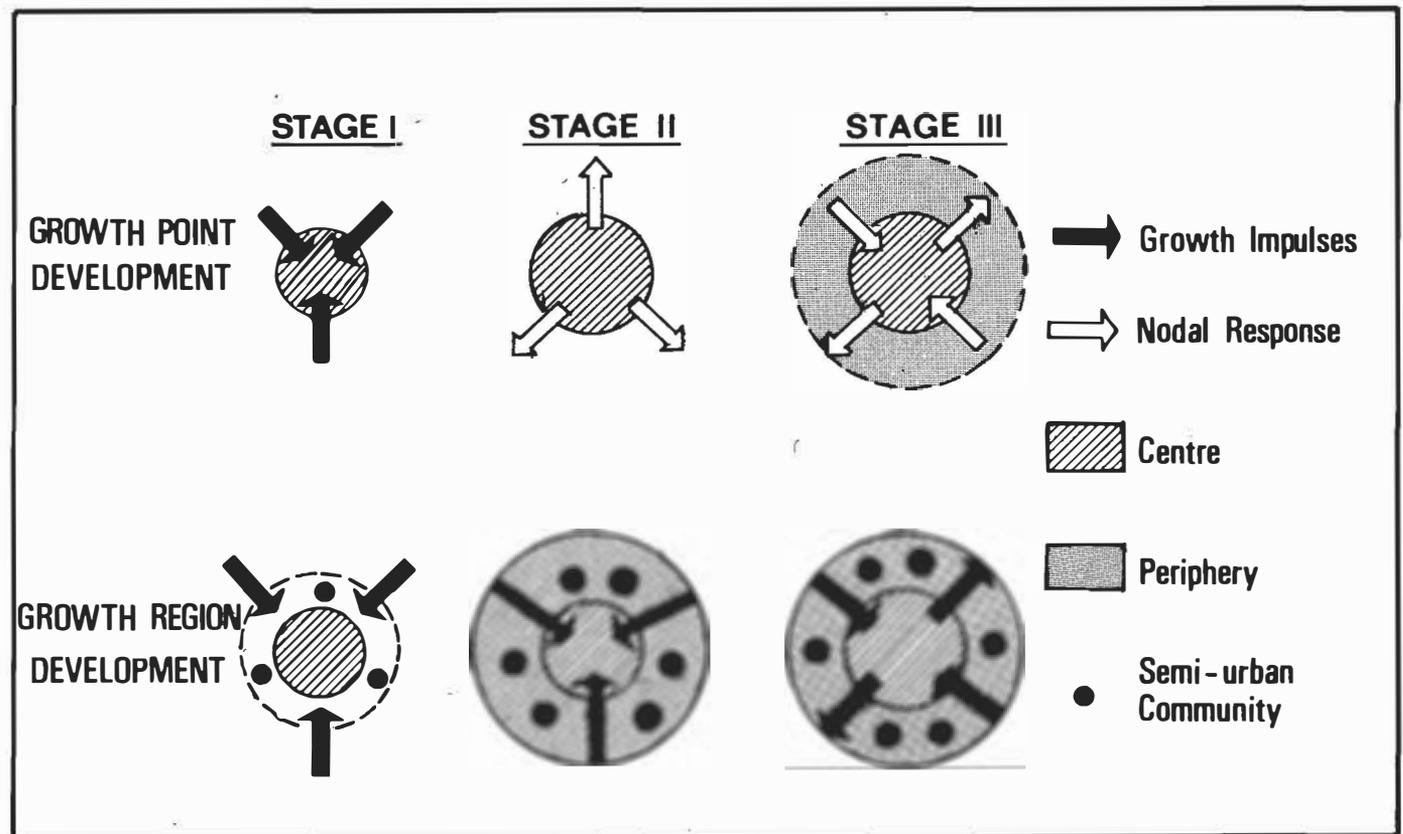


Figure 2

- A wide and continuous coverage by the media should accompany the development process.

Growth regions can be motivated to form either linear or sectorial development patterns (Figure 3). The sectorial pattern presents basically the concept of deconcentration regions encouraging the expansion of the metropolitan field. The linear pattern is more generally associated with development along national axes presenting penetration into the inter-metropolitan periphery. The desired pattern should be determined separately in each case, according to the unique conditions of each region.

5. A POTENTIAL SITE FOR A GROWTH REGION DEVELOPMENT

The main objective of achieving a more

equal distribution of economic activities in South Africa implies that development should take place away from the highly developed areas of the country. At the same time, penetrating into low potential sparsely populated areas does not seem realistic in the short range for reasons already mentioned. The present pattern of population potential (which indicates, by iso-potential lines based on a gravity model, population accessibility surfaces) reveals only one inter-metropolitan development axis between the PWV region and Durban (Figure 4) along which growth may take place. However, this area is expected to grow naturally even without directed national efforts. This growth trend is clearly reflected in Figure 5, indicating the white population potential growth trend. Directed development along this axis may accelerate the process but undoubtedly

at the expense of other potential areas. Furthermore, if priority is given to this area, the gap between the more developed north-eastern parts of the country and the less developed southern parts will be widened.

To achieve a more balanced pattern of national development, we should look for a higher priority development axis in the south. The 1970–1980 white population changes (Figure 6) indicate the possibility of development along the Cape Town–Port Elizabeth axis. This region, the Southern Cape, has also received the highest priority as a development region by the South African Board for the Decentralization of Industry.

Regarding the development of exclusive communities, the Southern Cape region can offer an attractive environment and favourable climate, as well as a semi-independent urban system based on Mossel Bay–Oudtshoorn–George–Knysna, located approximately midway between the metropolitan areas of Cape Town and Port Elizabeth. The area also has a relatively high percentage of skilled labour, which is essential for developing high technology industries, as reflected by the Location Quotients of white academics in Figure 7. The position of three universities in the Cape area and a teachers' college, is shown along the Cape Town–Port Elizabeth axis. Moreover, the recent discovery of oil on the continental shelf of the Indian Ocean adds another dimension to the attractiveness of the area for development.

In order to assess other regional attributes, a desirability potential index based on five economic and demographic variables was constructed. The variables are aimed at presenting the regional potential wealth, services, and population although their selection was influenced by the availability of data. The Economic Atlas of South Africa (Zietsman and Van der Merwe, 1981), based on economic regions, served as the main data source. Each economic region was assigned to one of six orderly ranked groups with regard to each of the five variables. The ranking sum was taken as the regional index. The following variables were included:

- The gross geographic product per

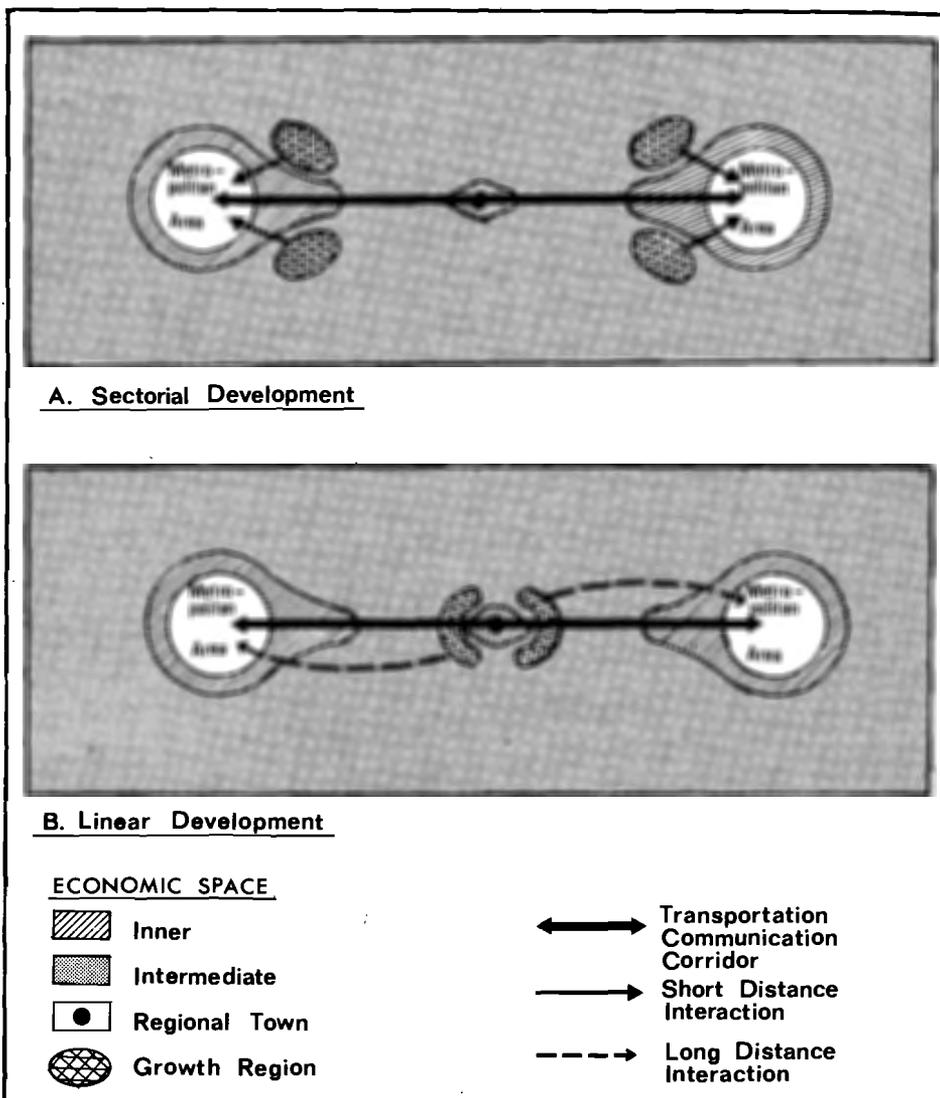


Figure 3

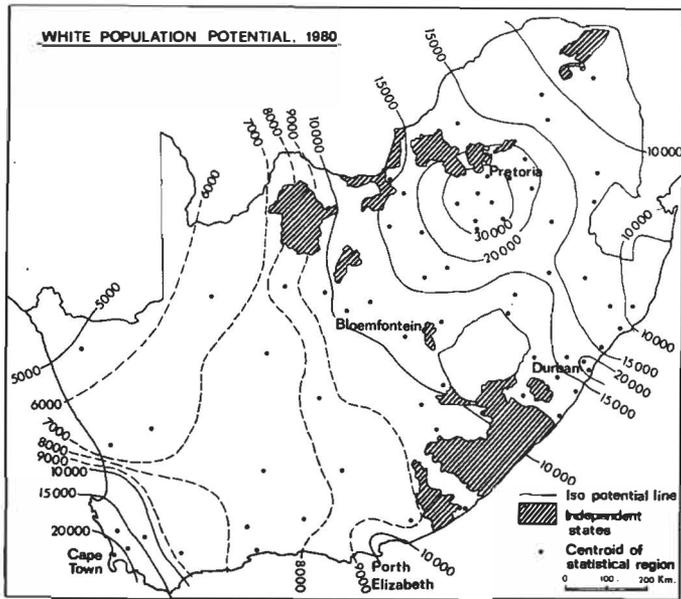


Figure 4

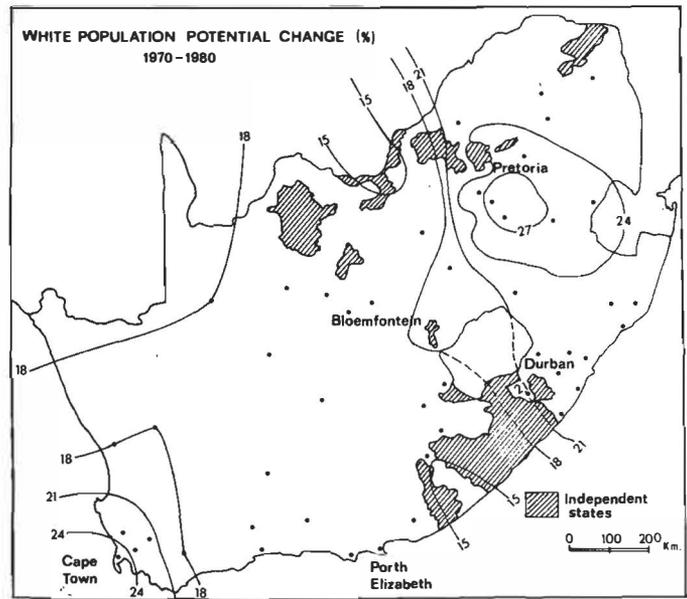


Figure 5

area;

- white population density;
- value of all buildings completed per 1 000 urban population.
- number of all retailing enterprises per 1 000 population, and
- number of motor cars per 1 000 population.

The results are presented in Figure 8 which indicates the relatively significant desirability potential of the Cape Town–

Port Elizabeth axis, especially in the George–Mossel Bay area. On the basis of these analyses, a growth region might be proclaimed and motivated between George and Mossel Bay.

6. CONCLUSION

High technology industrial communities as a base for growth region development involve low volume migration movements and should therefore be seen as

more realistic than attempts to stimulate massive development of many urban growth centres. From a national point of view, such an approach can pose a challenge for the younger generation and stimulate it towards greater economic involvement, creativity and self-fulfilment.

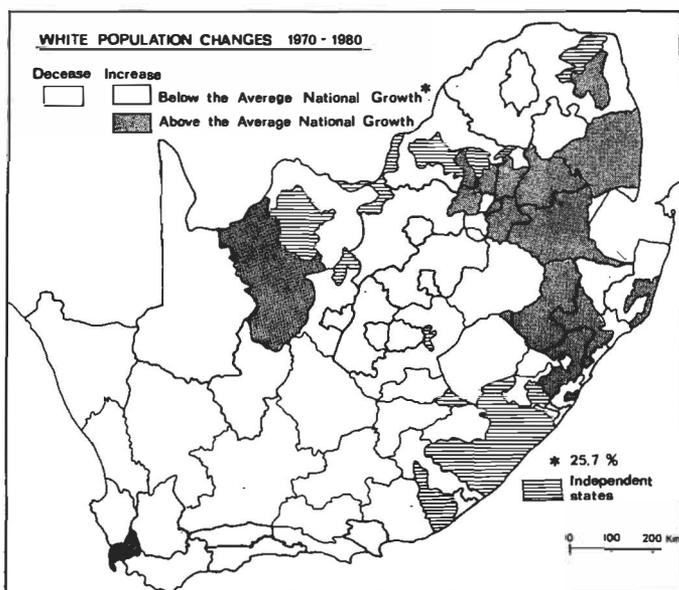


Figure 6

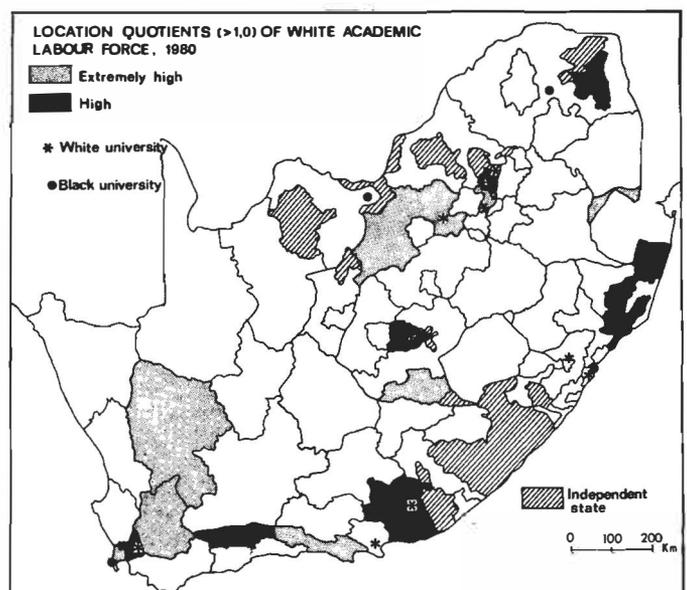


Figure 7

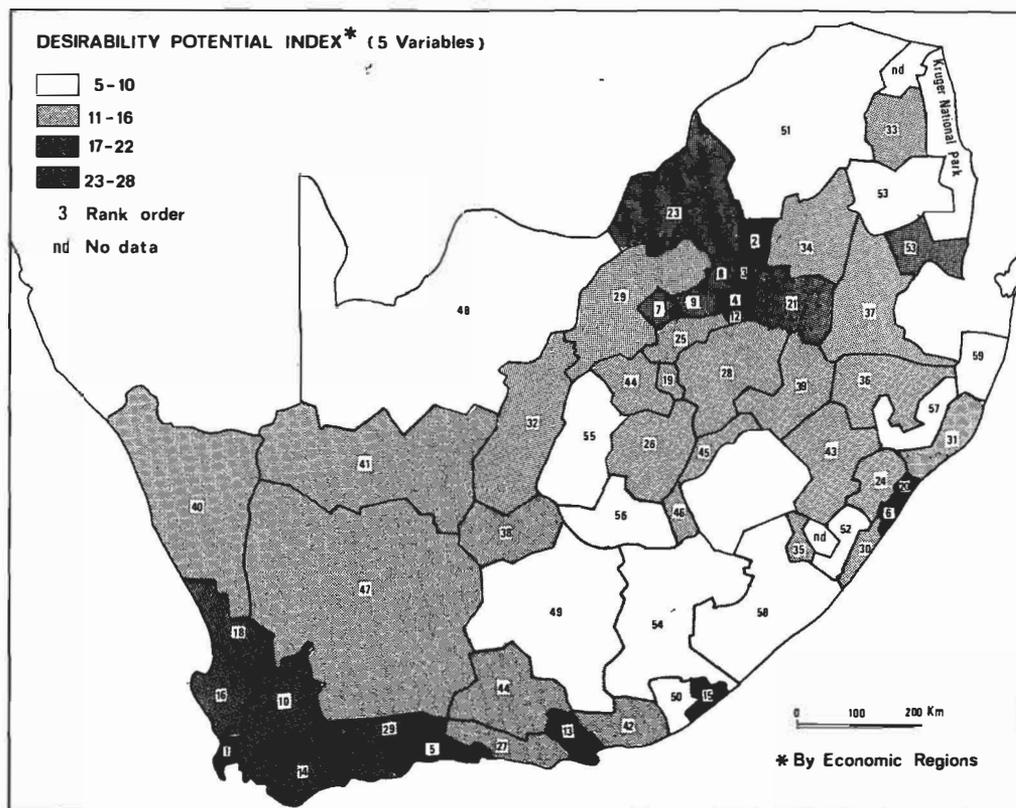


Figure 8

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