In Search of an Urbanization Policy for South Africa: Towards a Secondary City Strategy

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The problems of urbanization are escalating at an alarming rate in South Africa. Most of them can be traced to unbalanced urban development, relative over-concentration and an inability to create sufficient employment opportunities in the country's urban centers. A strategy of growth point development and industrial decentralization has been used to address the problem, however, without much success. It is, therefore, necessary to examine alternative strategies for urbanization and regional development in South Africa. A strategy which currently enjoys international acclaim and is receiving growing recognition is the secondary city approach. Unfortunately there is much confusion and disagreement about the concept and it is often misinterpreted. It is therefore necessary to provide a proper perspective of the concept of secondary cities and to indicate the implications of its adoption as an urbanization strategy for South Africa. More specifically the study seeks to provide answers and greater clarity with respect to the following questions: How is a secondary city defined; how do secondary cities perform internationally; what requirements underlie a successful secondary city strategy; and how appropriate is the strategy to South Africa? The main emphasis of this investigation is a comprehensive evaluation of the international and South African literature on the subject of secondary urban centers. Thereafter a specific methodology is empirically applied to South Africa. A statistical, cartographic and qualitative analysis of the urban system offers comparative urban profiles of settlements, from which five secondary centers are selected according to recognized criteria.

A complex set of factors has been responsible for the creation of a spatially uneven pattern of population distribution and urban growth in South Africa. In 1985 the four largest metropolitan centers, the Pretoria-Witwatersrand-Vereeniging complex, Durban, Cape Town and Port Elizabeth accommodated 30 percent of the total population of the RSA and TBVC countries, and 64

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percent of the urban population. This situation constitutes a classical example of polarized urbanization and unbalanced regional development. Countries in both the developed Western World and the developing Third World have, in the past, found it necessary to resort to some or other policy for urban or regional development to redress the imbalance.

In South Africa a strategy of growth point development and industrial decentralization has been used to address the problem. The country's regional development policy evolved over many years. In 1956 the government launched a programme to encourage industrial decentralization to the homeland border areas in support of the apartheid system. In time there were many adjustments to the policy, the most important of which were expressed in the National Physical Development Plan (RSA, 1975) and the Good Hope Plan (RSA, 1981). The underlying motive of these strategies were to keep blacks out of white cities. The Nationalist Party's apartheid structures disrupted the urbanization system of South Africa in several ways (Tomlinson, 1990a; Swilling et al, 1991). In order to suppress excessive urbanization in the largest metropolitan areas, on the one hand, and stimulate industrial development in the peripheral areas, on the other, various incentives were offered at approximately 60 growth points, to serve as catalysts for the redistribution of economic activities and population. However, in 1985 these centers contained only 14.5 percent of the country's urban population (Van der Merwe et al., 1987:18). It is the opinion of Dewar et al., (1986a:371) that "after thirty years of operation in South Africa, however, there are very few points which are showing significant success." Clearly, the policy has not had the desired impact. Research results form various quarters emphasize the ineffectiveness of industrial decentralization and growth point development in South Africa (Development Bank of Southern Africa, 1989; Maasdorp, 1985; 1990; Tomlinson, 1990a; 1990b; Urban Foundation, 1990). The poor performance of the growth points is attributed to various shortcomings in the policy (Development Bank of Southern Africa, 1989).

In view of the lack of success it is necessary to examine alternative strategies for urbanization and regional development in South Africa. The growth point policy is only one of several approaches to the problem of redistributing urban population and economic activities. Richardson (1978; 1981) identifies several options as possible approaches to a national urban development strategy: a laissez-faire approach, growth centers, development axes, a policentric structure, countermagnet cities, small service towns, preferential regions, subnational capitals, secondary cities and a hybrid approach. However, some disagreement surrounds the goals, comparative advantages and success record of these urbanization strategies. Rogerson (1989) sites authorities like Andrew Hamer and Harry Richardson when he stresses a shift in emphasis, whereby spatial objectives were integrated within the broad economic and social goals of national urban policies. At the same time

"self-selection" of locations according to market forces replaces "pre-selection" as a framework for urban spatial development. A strategy which has the potential to meet some of these demands, if implemented skillfully, is the *secondary city approach.* In the quest for an urbanization policy for South Africa as an alternative to the unsuccessful growth point strategy, the secondary city approach merits some consideration. Unfortunately much confusion and misinterpretation surrounds the concept and it is often criticized. It is therefore necessary to provide a proper perspective on the concept of secondary cities and to indicate the implications of its adoption as an urbanization strategy for South Africa. More specifically the paper seeks to provide answers and greater clarity with respect to the following questions:

How is a secondary city *defined?*
How do secondary cities perform internationally?
What *requirements* underlie a successful secondary city strategy?
How appropriate is the strategy to *South Africa?*

The main emphasis of this investigation is a comprehensive evaluation of the international and South African literature on the subject of secondary urban centers. This theoretical discussion of international evidence constitutes the conceptual basis. Thereafter an exploratory methodology is empirically applied to South Africa. A statistical, cartographic and qualitative analysis of the urban system offers comparative urban profiles of settlements, from which secondary cities can be identified according to selected criteria. However this is only a provisional study which should be followed up by comparative investigations on the other available urbanization strategies.

DEFINITION OF A SECONDARY CITY

The concept of a secondary city is frequently misused. Harody and Satterthwaite (1986:13) state that "a review of the literature found no agreement among governments or researchers as to how such urban centers should be defined." In the literature various terms are used for these urban settlements. Although terms like metrotowns, satellite cities, and middle cities are employed occasionally, the three most commonly used are *secondary cities, intermediate cities* and *medium-sized cities.* While "medium-sized" refers very narrowly to the size of the settlement, "secondary" and "intermediate" are wider in scope and imply an interjacent position and a supplementary role in various respects. These two terms are therefore preferred as the most descriptive. In the definition of secondary cities this intermediate role suggests three elements, viz., *size, function* and *location.*

City size

The rationale for a secondary city is that it should conform to a theoretically optimum population size and level of economic viability, which endows it with self-sustaining growth, enabling it to become a large city. These centers occupy a secondary position in the national urban hierarchy at a level just below the country's primary metropolitan centers but intermediate to them and the smaller urban settlements. Although population size is the criterion generally used for the definition of a secondary city, other size criteria can also be considered, e.g. density of population and built-up area (Rondinelli, 1983:47). Per definition the physical extent of such a city may constitute a single compact area or a limited number of interactive points within a small area, depending on the scale and purpose of the investigation (Osborn, 1974:15).

Population size is used most frequently in the literature as the criterion for the definition of secondary city status. It is generally used as the point of departure. Size limits should be chosen in such a manner that qualifying cities occupy an intermediate or transitional position between the few large and many small urban centers of the national system. The selected size class should embrace cities large enough to be able to maintain the momentum of self-generated growth but without the disadvantages of excessive concentration and its associated diseconomies and social costs, which are characteristics of some metropolitan centers.

There is no consensus on how the "ideal" population size of a secondary city should be defined in quantitative terms. An examination of the international literature revealed 27 different definitions of secondary city size (van der Merwe, 1990). The diversity can be attributed to the uniqueness of the individual countries' urban systems, as well as their varying levels of development and different economic structures. Not only is there variation among countries, but researchers do not always agree on the application of the definition within single countries.

Table 1: Summary of secondary city size classes.

	Minimum population	*Maximum population*
Number of case studies	27	27
Mean size	86,000	495,000
Median size	50,000	500,000
Modal size	50,000	500,000

To facilitate further interpretation, a summary of the observed population figures is provided in Table 1. From these figures it is apparent that secondary cities are defined on the basis of a *minimum population* of 50,000 and a *maximum population* of 500,000. The arithmetic mean is statistically very sensitive to extremes and therefore the values that occur most frequently (mode) and the central value of the ranked series (median) are regarded as more reliable limits. It is somewhat surprising that separate calculations for the Third World and First World countries produce a more or less similar size limit. The calculated population size is only an approximate indication and convenient point of departure for the identification of secondary cities. Size limits vary according to country, local circumstances and purpose, and should not be seen as absolute and rigid. Furthermore, to attach too much importance to the size of an urban settlement is to oversimplify the problem, since this is not the most important criterion for secondary cities. A large population does not necessarily ensure economic functionality.

Urban function

Although function is not easily measured quantitatively, it remains the most meaningful criterion for the identification of secondary cities. Rondinelli (1983:48) articulates this facet of secondary city definition as follows: "The term also connotes functional intermediacy in the flows of power, innovation, people and resources among places. Determining functional intermediacy is quite difficult. Thus analysts usually fall back on data that are readily available and use population size as an initial criterion. Empirical evidence from both developed and developing countries shows a positive correlation between city size and functional complexity."

The world's large metropolitan centers are currently experiencing a tremendous influx of migrants who have the notion that attractive employment and improved quality of life awaits them there. The functional role of secondary cities should be to generate economic vigor and employment opportunities as a permanent means of livelihood for migrants, who would otherwise move to the large metropolitan centers (Adepoju, 1983:3; Rivkin, 1976:3). Unlike a traditional growth point, a secondary city's economic base is not dependent on a "top-down" pre-selection location and external stimuli for its development, but generates its own inherent momentum in creating new work (Richardson, 1984:279). Such an urban center has already given proof of its internal viability and selected itself to facilitate further economic and social aims. Its vitality is seated in its own power and therefore it experiences self-sustaining growth. To have attained this favorable state, the urban center could not have been monofunctionally dependant on a single economic sector or enterprise, but rather would have relied on the multifunctional diversity of activities (Harody and Satterthwaite, 1986:13; Rondinelli, 1983:47 UNCHS, 1985:5). Within this diversity the following economic sec-

tors are the most important: commercial and service activities, informal sector enterprises, manufacturing, enterprises associated with agriculture, as well as administrative and government functions (Dewar et al., 1986b:131; Rondinelli, 1983:63-65). Most of these undertakings are labor intensive and relatively small in size. The more functions that are active in combination, the stronger is the city's ability to create jobs and enhance its vitality. In the process a hierarchical diffusion of development flows from secondary cities into their respective regions.

The activities mentioned above assist a secondary city to fulfil a dual role, viz. to guide metropolitan growth and to serve its immediate region by enhancing the general quality of life. In view of this there must be good infrastructural linkages between the center and its surrounding region, while the provision of efficient social services is essential. Its regional function should be strongly developed on a broad base.

Location

For secondary cities efficiently to perform the functions mentioned in the preceding section, they also have to be defined according to their strategic location with respect to the *large metropolitan centers, infrastructure* and *resource base.* In the process, appropriate internal and external *linkages* are very important. For the sake of interaction with its regional hinterland and other urban settlements outside the region, good communications networks are essential for the efficient functioning of a secondary city (Bose, 1984: 183; Rondinelli, 1982b:358). A good resource base is usually associated with agriculture, mining, the physical environment and general liveability in the region.

Distance from existing primary metropolitan centers is probably the most critical factor affecting location. Secondary cities should not be so close to large metropolitan centers that they become integrated satellites, neither should they be so far away that they are beyond reach of the spillover effects. "The small city near the large metropolis gains most of the benefits of agglomeration without the pains of large size" (Richardson, 1973:179). Smaller secondary cities will therefore function better close to the agglomeration economies and spillover effects of a metropolis, while larger centers can be equally as efficient at a greater distance. Usually the latter already have their own self-propelling growth mechanisms. It is impossible to determine precisely what the critical distance threshold for a favorable location is. Clearly, it will be related to the size of the metropolis and the secondary city respectively, the nature of the communication network linking the two centers, as well as the nature of the economic structure of the two cities. Hofmann (1986:264) and Richardson (1981:273) hold the opinion that the distance between a metropolis and a secondary city should be greater than

100–160 kilometers. Location of a secondary city should, however, always be evaluated within the context of the settlement's size and function.

In summary, normally only a small number of secondary cities would qualify for inclusion in a national urbanization strategy by meeting the requirements of the strict tripartite definition outlined above. The efficiency and performance of a secondary city depends on a variety of prerequisites which affect the successful implementation of the concept.

PERFORMANCE RECORD OF SECONDARY CITIES

The acceptability of a secondary city strategy and its application by authorities is largely dependant on the success record of these cities. The standards by which the performance of existing secondary cities is measured, is directly related to the definition of these cities. The following core questions require a positive answer if secondary cities are to be regarded as successful:

- Is population growth in the city such that it relieves pressure on the large metropolitan centers and significantly redistributes the national population?
- Can this population increase, in any degree, be attributed to the spontaneous interception of migrants on their way to the major metropolitan centers?
- Does the secondary city generate diversified economic growth capable of ensuring sufficient employment opportunities and an improved quality of life for its inhabitants?
- Has the physical, social and economic development of the secondary city and its surrounding region helped to reduce inequality between the regions and people of the country?

It is fitting to ask how well existing secondary city strategies have fared on these scores. The following two sections make observations about secondary city performance in First and Third World countries respectively. It should however be remembered that considerable disagreement exist in the literature on this topic.

Performance in developed countries

Demographically and functionally, medium-sized secondary cities favorably performed in Britain, France, Australia and the USA. Part of this accomplishment must be attributed to the process of counter-urbanization which was taking place in these countries in the 1970s (Kontuly, 1988). In this process people move from large metropolitan centers to medium-sized

cities for social and economic reasons. In England secondary cities accommodate almost half of the country's population and are growing more rapidly than any other urban settlements (Shepherd and Congdon, 1990:40). In the USA medium-sized cities are also experiencing rapid population growth (Hansen, 1988:323) and the quality of life they offer compares favorably with that of the large metropolitan centers (Appelbaum and Follet, 1978:162). In Australia, where these cities appear to be very successful as decentralization nuclei for economic activities and population, it has been demonstrated that medium-sized cities grow just as rapidly as metropolitan centers, while the costs of establishing industries and general living costs are lower in the former (Neutze, 1965:114). Bourne (1975:148) agrees with this and holds that community stability is better in secondary cities. Alonso (1975:443) maintains that there is less inequality of personal income in medium-sized cities. According to Bairoch (1982:532) secondary city income is higher, employment opportunities are more readily available and general quality of life is more favorable. Available evidence also indicates that the unit costs of service provision are lower in medium-sized cities than in large metropolitan centers or small towns (Richardson, 1981:280; UNCHS, 1985:6). It is apparent, therefore, that secondary cities have some agglomeration advantages, but are plagued less by the diseconomies and social disadvantages of over-concentration in metropolitan centers (Hansen, 1981:113). Some authors may disagree about the above claims.

Performance in developing countries

In the Third World countries of Africa, Asia and South America the track record of secondary cities is far more ambiguous than in the First World. On the positive side Rana and Krishan (1981:38) have found that India's medium-sized cities are experiencing moderate to rapid growth which compares favorably with that of the country's large cities. These centers have also succeeded in gathering high-order administrative, educational and health care functions. The pure industrial centers experienced only moderate growth. In general, India's multifunctional centers grew more rapidly than the more vulnerable monofunctional centers. Ekanem and Adepoju (1977: 214) emphasize the fact that in Nigeria, medium-sized centers successfully intercept part of the stream of migrants to the large metropolitan centers, owing to their ability to provide employment. According to Rivkin (1976:418) the intermediate cities of Brazil and Turkey also prove that centers other than the metropolitan ones can display economic diversification, provide a more equal distribution of income and serve as migrant destinations. Moreover these cities are more manageable and have a more favorable cost-benefit ratio than the large metropolises. Richardson (1987:213-214) is cautiously optimistic about continued productivity of intermediate cities in Brazil and Pakistan. A large degree of success has also been achieved in

Thailand by concentrating development in secondary cities having definite economic potential and strong multiplier effects (Egan and Bendick, 1986: 218).

The most noteworthy success story of secondary cities in the Third World is probably that of South Korea (Rondinelli, 1983:150; 1986:251). Experience there has shown that the strategy can indeed play an important positive role in realizing a country's urbanization goals. Employment opportunities were created in the intermediate cities, their economic base was expanded, the stream of migrants to the metropolitan centers was intercepted, the excessive growth of Seoul was subdued and inequalities between regions were reduced. This was achieved by the application of a wide variety of strict measures over a long period of time. The central government invested heavily in social services and infrastructure, became involved in productive job creation and in so doing, made the secondary cities attractive to the private sector. In addition an imaginative programme of rural and agricultural development was implemented.

In spite of this catalogue of positive results, Rondinelli (1983:51-60) is rather ambivalent in his view of the performance of secondary cities in developing countries. Although African, Asian and South American secondary cities grew remarkably rapidly in terms of both absolute population figures and number of settlements, relatively speaking this group of cities developed more slowly than the large metropolitan centers. In other words, their proportional share of the country's total urban population did not increase dramatically. Yet, Rondinelli (1983:85) does recognize the potential of a secondary city approach: "Despite their relative weaknesses in the economies of developing countries, secondary cities seem to perform important economic and social functions that can contribute to national development." To summarize, the positive performance of secondary cities appears to weigh more heavily than the negative results. While the strategy is not without risk, there is a good chance of success if the requirements and criteria associated with the selection and promotion of secondary cities are respected.

REQUIREMENTS FOR A SECONDARY CITY STRATEGY

Various commentators have expressed opinions on the principles underlying a secondary city strategy, and the requirements for its success are well documented. Yet, many secondary cities have fallen by the wayside. What is to be learned from this?

Reasons for poor performance

Before prescribing a recipe for successful secondary city performance it is helpful to ponder on the causes of not coming up to expectations. Scrutiny of

the relevant literature reveals various economic, political, administrative, institutional, social and physical shortcomings as reasons for the poor performance of some secondary cities.

Harody and Satterthwaite (1986:344), Richardson (1987:219) and Rondinelli (1983:177) advance a number of contributory factors:

1. The achievements of secondary cities depends largely on adherence to the criteria applicable to the identification and healthy functioning of secondary cities. These requirements have been well documented by Bos (1989), Bose (1984), Egan and Bendick (1986), Harody and Satterthwaite (1986), Richardson (1981; 1984; 1987), Rondinelli (1982a; 1983; 1986) and UNCHS (1985), and are summarized here in Table 2.
2. Probably the most important reason for the poor performance of secondary cities is that it is often coupled with "top-down" pre-selection of too many or the wrong urban centers, compared to the capacity of the country's urban system. Many of these centers do not have the potential to meet the requirements for successful secondary cities. They are therefore unable to compete with the large metropolitan centers. The unique characteristics of a secondary city, viz., intermediacy, diversity and self-selection on the basis of inherent vitality were not sufficiently accounted for in the final identification of target cities. The preselection of cities for the sake of political expediency and of self-interest, rather than in the interests of national social and economic needs, can result in the failure of the entire strategy.
3. Secondary cities fail because governments themselves do not set the example to the private sector by decentralizing administrative functions to these cities. The role played by institutions such as universities, state departments and military installations, as catalysts for urban development, is well-known.
4. Often long-term urbanization policy clashes with the short-term expectations of the decision makers. Consequently, overhasty policy changes are made before sufficient time has been allowed to show results. Time must be given for secondary cities to demonstrate their real capabilities and strengths. Changes in the distribution of national populations occur so slowly that a 20-year horizon is probably an appropriate target (Richardson, 1984:285).
5. Failures are less attributable to weaknesses inherent in a secondary city strategy than to the manner of policy implementation. According to Hansen (1990:61): "It is not so much that they are wrong, they simply have never really been put into practice." Disappointing results are often the consequence of wrong application procedures and government's half-hearted commitment to the policy (Rondinelli, 1986:243). Policy instruments for the application of the strategy often lack driving force, while

the financial resources of governments are too limited to fuse the ideal with practice. Decisions to execute a strategy will be fruitless without resolute application of the appropriate rules of play.

Table 2: Criteria for indentification of secondary cities.

INDICATORS	VARIABLES
GROWTH POTENTIAL	Proven growth record Internal vitality
SIZE	Population Built area Density of occupation
LOCATION	Distance from metropoles Transportation network Linkage with own region Linkage with other regions Destination for migrants
ECONOMIC ACTIVITIES	Employment opportunities Diversity of economic sectors Commerce Manufacturing Informal sector Agro-economic enterprises Small businesses Administrative functions
RESOURCE BASE	Minerals, agriculture, tourism, etc. Labour Market Capital Entrepreneurship and expertise
INFRASTRUCTURE AND SERVICES	Water and electricity Internal transport Housing Education, health and recreation Effective local government
QUALITY OF LIFE	Poverty Income Unemployment Squatters Crime Basic needs

Formulation and application of policy

"The economic and political forces that have created inefficient and undesirable patterns of urbanization in many developing countries are unlikely to change automatically, and it is equally unlikely that strong systems of secondary cities will emerge without deliberate and consistent government interventions" (Rondinelli, 1983:229). Governments should support self-selected secondary cities with the provision of infrastructure to enable free market choices to act more efficiently. With a view to effective policy formulation and application it is essential that the causes for the poor performance of secondary cities be identified and eliminated. Every country has to formulate its own unique policy taking account of prevailing circumstances and the intended goals. Richardson (1973:184) lists the following possible objectives: "The goals of national urban policy are the same as those of other national policies, e.g. growth, efficiency, equity, quality of life, stability, participation." Harmonizing a secondary city strategy with a national urbanization policy is therefore of cardinal importance. Without such agreement conflict of interest and confusion with respect to the country's urban, political, economic and social priorities are likely to arise.

Rondinelli (1983) gives a detailed description of the place and nature of a secondary city strategy within a national urbanization policy. The framework of his well-known strategy involves three broad actions, viz., (i) strengthening of existing cities that already meet the requirements of secondary city status, (ii) upgrading smaller urban centers so that in time they can also reach intermediate size, and (iii) the improvement of secondary cities' links with their own and other regions. The most important component of this comprehensive strategy is the strengthening of existing urban centers that have secondary city potential. To achieve this the strategy must make provision for the following four elements: extension of public utilities, improvement of the physical infrastructure, strengthening of the economic base and employment structure, and the expansion of local authorities.

The requirements and standards for the implementation of a secondary city approach embrace a wide variety of factors. The methodology for the application of such a strategy can be condensed into three main steps:

1. Be clear about the aims and objectives to be pursued and decide what *specific urbanization policy* will best serve these goals within the limits and potential of national and regional realities. The secondary city approach appears to be a possible option when a country is striving to redistribute economic and social development spatially according to the principles of economic efficiency, social equality and political stability.
2. Following the decision to adopt a secondary city policy in principle, the most important step is the *identification of optimal centers* in accordance with a set of appropriate criteria The most important requirements are

given in Table 2 in terms of seven broad indicators, each with a set of specific variables. An urban center obtaining a favorable grading on these factors becomes a candidate for final identification as a secondary city.

3. After the potential secondary cities have been identified, the centers have to be made operational by the application of a set of *implementation principles.* These principles are directly related to the definition of and requirements for a secondary city, mentioned previously.

SECONDARY CITIES FOR SOUTH AFRICA

Against the background of the preceding explanation of the definition, performance record and requirements of secondary cities, the question arises what the implications of the concept are for an urbanization policy for South Africa? The poor performance of the decentralization policy and growth-point approach is well known. The urban system is suffering from the influence of apartheid. An alternative urbanization strategy is urgently needed for the new South Africa which would be capable of achieving the following objectives:

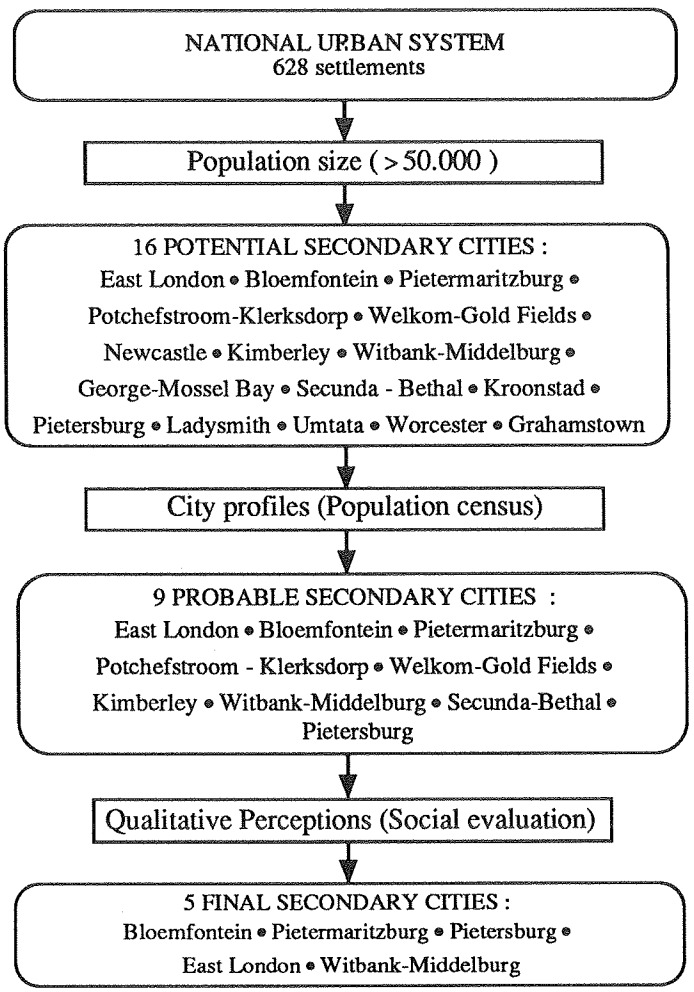
- Economic growth and development of economic activities in self-selected cities, undergirded by prevailing market forces;
- Redistribution of the urban population in vigorous, self-sustaining urban centers;
- Spontaneous interception of migrants headed for the large metropolitan centers;
- Improvement of the general quality of life through job creation and access to social services; and
- Reduction of inequalities between people and regions.

Evidence from international sources suggests that a secondary city strategy has the potential to achieve these goals. Indeed, secondary cities have been identified by various commentators as an option with a relatively positive performance record, provided that the conditions for successful application of the policy are met. A secondary city strategy should therefore be strongly considered for inclusion as part of a comprehensive urbanization policy for South Africa. However other urbanization strategies should, in the long-run, also be subjected to this kind of exercise before a final decision is reached.

A crucial step to ensuring that the policy yields positive results is to identify secondary cities in accordance with a methodology which measures up to international criteria. With this in mind, a number of potential centers are selected on the basis of their population size. Next, the group is reduced to a smaller number of probable centers by putting together a quantitative urban

profile for each. A final selection[1] is made once the probable centers have been evaluated qualitatively according to the perceptions of the local community (Van der Merwe, 1990). This methodology is represented diagrammatically in Figure 1.

Figure 1: Methodological framework for the identification of secondary cities in South Africa.



Identification of potential secondary cities

Population size is the most frequently used criterion and first filter for the identification of secondary cities. In the national rank-size system these centers occupy an intermediate position between the large metropolises and smaller urban settlements. The most representative population size-order of secondary cities has been cited to be a minimum of 50,000 and a maximum of 500,000 (Table 1). By this standard, sixteen South African urban centers qualify as potential secondary cities while four metropolitan centers exceed this size level. Notwithstanding the deficiencies of population statistics, the 1985 population census figures remain the only available national source for this purpose.

Figure 2: Distribution of potential secondary cities in South Africa.

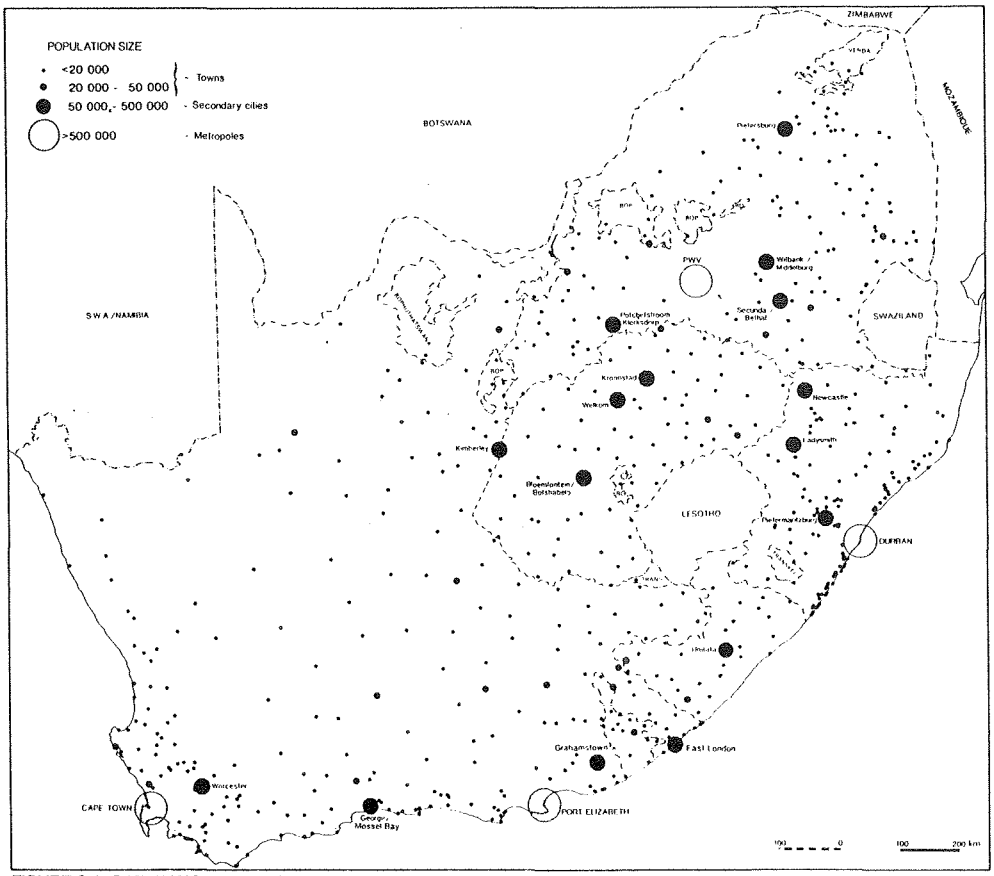


FIGURE 2: DISTRIBUTION OF POTENTIAL SECONDARY CITIES IN SOUTH AFRICA

Below the level of intermediate cities there are 608 towns with populations smaller than 50,000. The location of these secondary cities is shown in Figure 2, while Figure 3 demonstrates their intermediate position on the national rank-order system. The identified centers have a position along a transitional gradient between the sharp metropolitan peak and the gently sloping rank-size curve of the smaller towns. Spatially, the sixteen potential secondary cities are well distributed to fulfil their role in South Africa. They tend to be located along the coast, as well as in the northern and eastern parts of the country. This pattern coincides with the broad national population clusters in the latter areas and thus with the potential sources of migrants. The secondary cities occupy favorable interjacent positions in respect of distance from the four metropoles.

Figure 3: Urban rank-size system of South Africa.

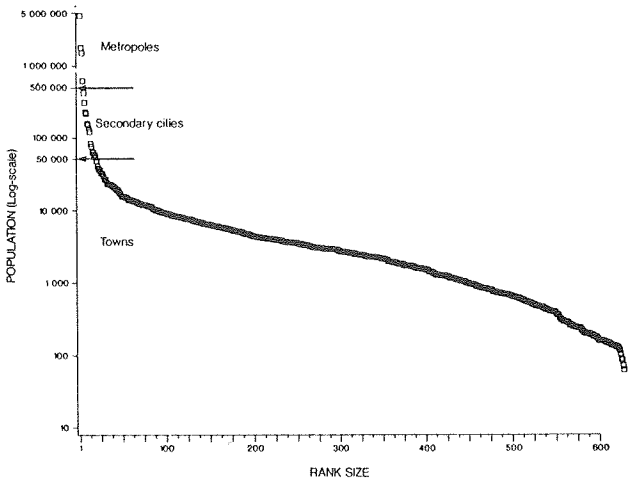


FIGURE 3: URBAN RANK-SIZE SYSTEM OF SOUTH AFRICA (1985)

The aggregated demographic and socio-economic profile of the potential secondary cities is significant when compared to those of the metropolitan centers and other towns respectively (Table 3). The group of potential secondary cities accommodates 16 percent of the country's urban population, while the smaller towns contain 19 percent of the urban total. Although the population of the secondary cities is small compared with that of the metropolises, the former have almost as many inhabitants as the nearly 600 smaller towns. Moreover, the number of centers in this intermediate category grew from only nine in 1970 to sixteen in 1985, but their share of the country's urban population increased from 14 percent to only 16 percent over the same period. Though slight, the secondary centers do have some

Table 3: Profile of aggregated secondary cities.

Variables	*< 50,000 (towns)*	*50,000– 500,000 (second. cities)*	*> 5000,000 (metropoles)*	*Total*
Number of centers(1970)	497	9	3	509
Numberof centers(1985)	608	16	4	628
Population growth (1970-85)	1.47% p.a.	2.16% p.a.	2.45% p.a.	2.20% p.a.
Total population (1970)	1,861,251	1,462,319	6,649,715	9,973,285
Total population (1985)	2,695,876	2,253,402	8,879,392	13,828,670
White population	623,885	639,213	2,818,713	4,081,811
	(23.1%)	(28.4%)	(31.7%)	(29.5%)
Black population	1,453,747	1,304,567	4,017,214	6,775,528
	(53.9%)	(57.9%)	(45.2%)	(49.0%)
Coloured population	546,955	225,646	1,431,749	2,204,350
	(20.3%)	(10.0%)	(16.1%)	(16.0%)
Asian population	71,289	83,976	611,716	766,981
	(2.6%)	(3.7%)	(6.9%)	(5.5%)
Mean age	26.7 year	26.6 year	28.0 year	27.6 year
Children<15yr	36.5%	33.4%	29.4%	31.3%
Literacy (Std 2 + of > 25 yr)	76.9%	83.8%	86.7%	84.6%
Level of educ. (Std 10 of > 25 yr)	16.8%	19.6%	22.1%	20.9%
Unemployment	10.1%	10.7%	10.7%	10.6%
Economically-active Population (Total)	33.2%	36.4%	42.3%	39.8%
- Agriculture	5.0%	1.5%	1.3%	1.9%
- Mining	5.2%	7.4%	5.8%	5.9%
- Electricity/water	1.7%	1.3%	1.0%	1.1%
- Construction	10.1%	8.2%	7.4%	8.0%
- Transport	7.7%	7.3%	7.0%	7.2%
- Manufacturing	13.3%	17.8%	27.4%	23.9%
- Services	34.4%	35.0%	27.8%	29.8%
- Commerce	19.0%	16.7%	15.0%	15.8%
- Finance	3.6%	4.8%	7.3%	6.4%

positive dynamics concealed in them. This is underlined by their average population growth rate of 2.2 percent per annum between 1970 and 1985, which is somewhat lower than that of the metropolitan centers, but higher than that of the other towns. In the intermediate group as a whole, 28 percent of the population is made up of whites, which is more or less on a par with that of the metropolises. Compared to the metropolitan centers, the average age of the population in the secondary cities is lower, there are more children, literacy and level of education are lower, unemployment is the same, and a smaller proportion of people are economically active. The combined profile of secondary cities is, however, more favorable than that of the grouped towns. The proportions of secondary city economically active populations relative to the metropolises show agriculture, electricity, construction, transport and commerce to be more or less the same; manufacturing and finance to be less well represented; and mining and services to be better off. To summarize, in a social-demographic sense the secondary cities perform more weakly than metropolises but better than towns—a true intermediate position according to the definition of the concept. The diversity of employment opportunities per economic sector also compares very favorably with metropolitan centers.

As a group the sixteen preliminarily identified centers display an intermediate character, with the potential to function as secondary cities, provided that they meet the other requirements listed in Table 2. A further step is to test the urban profiles of these potential secondary centers individually against specific demographic and socioeconomic criteria.

Empirical urban profiles

Each of the four metropolitan centers and the sixteen potential secondary cities was characterized in terms of certain available variables according to the 1985 census. This filter was then used to identify a smaller number of probable secondary cities. It is necessary briefly to explain each variable as it relates to the functioning of secondary cities, before scaling the individual profiles of the potential secondary cities against the norm of the country's total urban profile (Table 3).

1. *Annual growth rate is* an indicator of a city's proven rate of population increase and thus its vitality in the recent past. East London, Bloemfontein, Pietermaritzburg, Newcastle, Witbank-Middelburg, George-Mossel Bay, Secunda-Bethal, Pietersburg, Ladysmith, and Umtata grew faster than the national average of 2.2 percent between 1970 and 1985.
2. *Population number is* a measure of a city's size and sometimes of its ability to generate its own growth. Witbank-Middelburg, Kimberley, Newcastle, Welkom, Potchefstroom-Klerksdorp, Pietermaritzburg, Bloemfontein and East London each had more than 100,000 inhabitants in 1985.

3. *Ethnic composition* of the population can, given certain assumptions, be a surrogate for economic and technical initiative, expertise and entrepreneurship. White leadership, having its origin partly in the discriminatory political system of apartheid, has an advantage in this regard. Each population group has been expressed as a percentage of the city's total population. Compared to the total average of 30 percent, the white population component is proportionally more strongly represented in Bloemfontein, Potchefstroom-Klerksdorp, Welkom, Witbank-Middelburg and Secunda-Bethal.
4. *Age of population* and *children* measures aspects of the level of economic dependency of a city's population and the size of the potential labor force. The former is represented by the average age in years while the latter is expressed by the number of children younger than fifteen years. East London and Potchefstroom-Klerksdorp are the only two urban complexes which tend to have the more favorable balance of a relatively older population with less children. The population of the other centers is younger with more children, implying a heavier dependency burden.
5. *Literacy* and *level of education* refer to the available skills in a city's population by which people gain access to certain occupations and sources of income. Both reflect the degree of sophistication and level of development that a community has attained. The former has been calculated as a percentage of the people older than 25 years, having a qualification of more than standard two, while the latter is the percentage of matriculated persons older than 25 years. Compared to the national average, East London, Pietermaritzburg, Witbank-Middelburg and Pietersburg are most favorably endowed in terms of these criteria.
6. *Unemployment* and *economically active population* are two related indicators of a city's economic base. The former measures the deficiency in employment opportunities and consequently points to an absence of economic vitality in a city. The number of unemployed is calculated as a percentage of the potential work force. Economically active population reflects the employment opportunities that function to the advantage of the city's economic base and the population's quality of life. This measure is expressed as a percentage of the city's total population and excludes children, students, housewifes, the retired and the unemployed. East London, Potchefstroom-Klerksdorp, Welkom, Witbank-Middelburg and Secunda-Bethal rate most favorably in this regard. The unemployment ratios and economically inactive proportions in the other centers are higher than the country's averages.
7. *Employment per economic sector* reflects the diversity and extent of the city's economic activities and, by implication, suggests the identity of its overall function and economic base. The number of workers in each of the nine

sectors is determined as a percentage of the total economically active population. In East London, Bloemfontein, Pietermaritzsburg, Kimberley, Witbank-Middelburg, Pietersburg, Ladysmith and Worcester, four or more sectors have a higher percentage of employees than the national average. Among them East London, Bloemfontein, Kimberley and Worcester, with five strong sectors each, display the highest level of economic diversity.

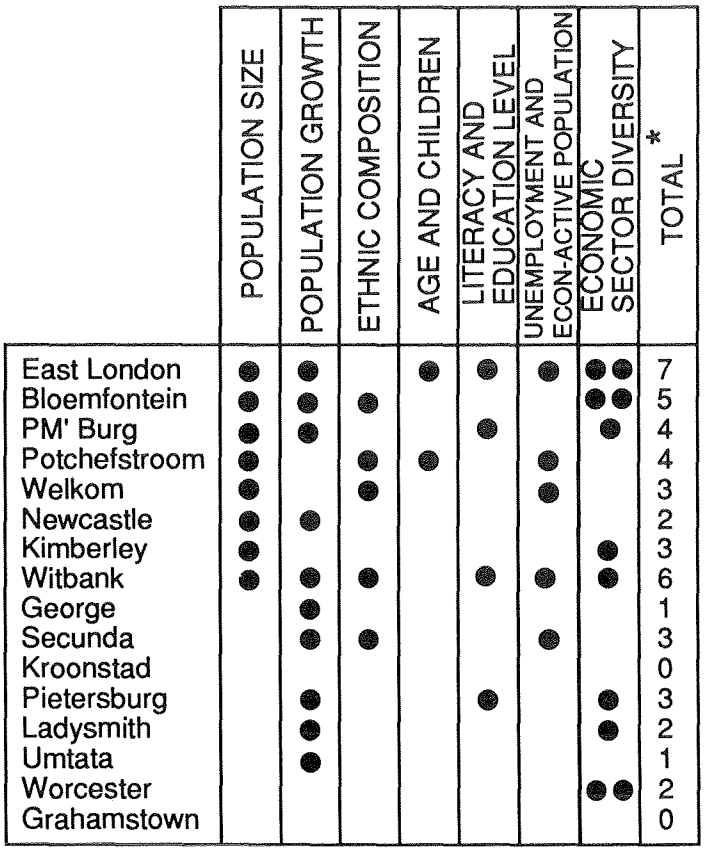
The review of the urban profiles given in Figure 4 suggests that the initial sixteen potential secondary cities can be reduced to nine probable centers. They are *East London-Mdantsane, Bloemfontein, Pietermaritzburg, Potchefstroom-Klerksdorp, Welkom-Goldfields, Kimberley, Witbank-Middelburg, Secunda-Bethal and Pietersburg-Seshego.* This preliminary selection, however, rests on incomplete census data and on only a limited set of criteria. Before a final decision can be made it is wise to test the potential secondary cities against the full spectrum of relevant criteria, as set out in Table 2. Quantitatively measurable data for such an exercise are not available, so that a qualitative assessment is called for to help construct a more comprehensive picture.

Qualitative perceptions: A final selection

Census data on their own is not able to reveal the true potential of secondary cities. A subjective awareness of an urban center's economic and social heartbeat is of supplementary value. A local community's own experience and perception of its development provides an opportunity to formulate a domestic opinion of the city's performance capability. Such an exercise is useful because the local community becomes involved as it evaluates the urban center according to the prescribed criteria. Objective interpretation by an outsider is, however, necessary to compensate for the subjective perceptions of people who try to "sell" their own town or city as a secondary city.

Consequently, the probable secondary cities were visited in situ and discussions were held with responsible authorities and parties. Decision makers were requested to evaluate their town or city in a written document on the basis of relevant criteria (Table 2). This qualitative evaluation constitutes the third filter (Figure l) before recommending the final set of secondary cities. Several centers did not meet the requirements and performed relatively poorly according to the qualitative observations (Van der Merwe 1990). Furthermore, too heavy a reliance on risk-laden mining activities and/or the fragmenting influence of apartheid homeland policy often undercut the economic base and vitality of some settlements.

Figure 4: Summary of secondary city profiles.



● Above average performance

* " Total " referse to the sum of the individual frequencies at each centre.

The final choice of secondary cities is controlled by the ultimate number of centers to be identified according to the strategy's dictates. The recommendation put forward in the international literature that not too many centers should be designated (Richardson, 1987:213), supported by Walter Christaller's hierarchical central place system (Christaller, 1966), as well as the real nature of the South African urban rank-size structure, suggests that five or six secondary cities be the optimum attainable number for this country. Maasdorp (1990:136) and Tomlinson (1990b:160) advocate a similar number of growth points for the country. Although physical, economic, social and administrative factors ought to be taken into account simultaneously,

the national rank-size system (Figure 3) dictates that only five secondary cities be included at the second level of the urban hierarchy (Van der Merwe, 1990:68). After careful examination of the information, the following five "final" secondary cities, in order of importance, emerged: Bloemfontein, *Pietermaritzburg, Pietersburg-Seshego, East London-Mdantsane* and *Witbank-Middelburg.* The success of a secondary city strategy ultimately rests on the way in which the policy is implemented. It is therefore imperative that all of the implementation prerequisites of a secondary city strategy be honored with great sensitivity. These places select themselves on account of their proven performance record and deserve infrastructural support from the government to facilitate the free market processes—perhaps a hybrid approach between secondary cities and laissez-faire!

CONCLUSION

Three evaluation filters have been used to extract the five ultimate secondary cities from the 628 centers that comprise the national system. Initially sixteen potential centers with a population of more than 50 000 were identified. Thereafter, nine probable centers which performed best in terms of their urban profiles were isolated. The last filter, a qualitative analysis of local perceptions, distilled out five final cities. This exploratory analysis does not cover the full spectrum of research and information necessary for the application of a secondary city strategy in South Africa. Future scientific investigation should concentrate on the following aspects:

- More penetrating empirical research, using extended data sets and the full set of criteria given in Table 2, must be undertaken before a final decision is made. The results of this exercise on secondary cities should also be compared with future research on other urbanization strategies. Furthermore, the performance of the identified centers must be monitored continuously in accordance with the general social and economic goals of the country.
- The formulation of, and application methodology for, a national urbanization policy, of which a secondary city strategy is only a subcomponent, should be spelled out more clearly. In the past various documents addressed urbanization under the banner of a "strategy," without really being one. It is not sufficient to repeatedly lay down principles and guidelines for urbanization. A philosophically-based and practically-orientated national plan of action must identify the objectives, actors, processes, inputs, and the location of the individual regions and centers by name. The strategy must have clarity concerning the questions of "what, where, when, how and by whom"?
- The fragmented and negative role of political decision-making and the inhuman apartheid policy on urban development in South Africa was brought

to attention during the investigation. Further scientific analysis of the exact nature and extent of this phenomenon is necessary.

• Much overlapping and repetitive research on urbanization is conducted in South Africa by a variety of individuals and institutions, without the necessary contact between them. A register in which all these efforts are recorded, would lead to better co-ordination and efficiency.

South Africa's urbanization problems are compounding at an alarming rate. Most can be traced to apartheid-related structures, lack of an appropriate urbanization strategy and an inability to create sufficient employment opportunities in the urban centers. In order to achieve an acceptable quality of life for all South Africans, innovative policies regarding economic development and urbanization is called for. A secondary city strategy can play a supplementary role in such an endeavor.

NOTE

1. Terms like "selection" and "identify" do not imply an official pre-selected top-down choice, but rather an informal self-selection of the city on account of its own proven record. In such places, authorities facilitate freemarket choices by development of infrastructure and social facilities.

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