



THE NEED FOR AND POSSIBILITIES OF ECONOMIC DECENTRALISATION

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OPSOMMING

Prof. Marais behandel hier die behoefte aan en moontlikhede van ekonomiese desentralisasie.

Daar is heelwat weersprekende standpunte oor die vraagstuk gedurende die afgelope tien jaar gestel en die hele aangeleentheid word hier in hersiening geneem.

DECENTRALISATION — A DISADVANTAGE TO INDIVIDUAL FIRMS

The businessman's first responsibility is the profitability of his firm. He wants to obtain the maximum difference between the value of his input and output. Today it is a recognised fact that the larger a city is, the stronger the pull, the reason for this is that agglomeration advantages increase with the growth in size of a city. There is a close correlation between the city's size and availability of agglomeration factors. We can divide these agglomeration factors into (1) scale economies, (2) localisation economies, (3) inter-industry and urbanisation economies.

In scale economies, the manufacturer has the advantage of being located in a big market and therefore in his production he is able to utilise economies of scale. It is an economic axiom that division of labour is limited by the extent of the market; a factor which is relevant to the location of industry.

Here we have the same position as a firm located in a country with a large market, such as the United States. This company is able to utilise economies of scale in its home market. It should also be very competitive outside this

market, since the market constitutes but a small percentage of the firm's local production and it can try to cover just more than its direct costs. Consequently transport costs for a firm located in the centre of its market have a small overall effect on its profitability.

In localisation economies, industries may achieve external economies by concentrating in one area. A good example here is the clothing industry, which is concentrated in cities such as Cape Town and Johannesburg. These manufacturers have common access to the very source of specialised labour, accessibility to buyers and the use of diverse specialised services catering for the industry.

The third element, viz. inter-industry and urbanisation economies accrues to firms which are concentrated in one centre. Plants located in major urban centres are able to purchase and sell intermediate products among themselves, to utilise the services of research laboratories and universities and will benefit from proximity to governmental offices in order to reduce uncertainty and speed up procedure for licensing and so on.

The cost of infra-structure which may be prohibitive for any given industry, is easily covered if divided among several industries.

Although we have no statistics to quantify the benefits of these agglomeration factors to manufacturers we may conclude that these advantages are an important contribution to

the profits of individual firms. William Alonso¹⁾ concludes that "big cities may yield a greater net return per worker or inhabitant than smaller ones."

Luttrell²⁾ estimated that for the median firm in the manufacturing industries studied, the total cost per unit at the new factory in its first three years, taken together, would have exceeded that at the parent factory by about 35 per cent. After the early teething period, costs tend to settle down to levels comparable with those at the old location, but the high costs of the initial period must act as a powerful deterrent to movement.

Not only do we have economic advantages but there is also the fact that individual manufacturers have less contingencies when located in the main industrial centres. It is a well known fact in modern management theory that the individual manager always tries to protect his firm against uncertainties and psychologically he feels secure in the main centres. **Perhaps this is one of the biggest problems affecting decentralisation.**

THE WORLD TREND IS TOWARDS CONCENTRATION

An accepted fact nowadays is that the orientation of most industries leans more and more towards markets and central places.³⁾ **One of the principal reasons for this development is the structural change in manufacturing industries,** the most important change being the development of intermediate industries, i.e. those industries devoted primarily to supplying other manufactures with fabricated products for further processing or assembling.

Since the Second World War these industries, which are also termed the "science-based" industries, have shown the highest growth rate in manufacturing.

Large scale operations are one of the main characteristics of these producers; a factor which generally necessitates the allocation of plants near larger, diversified industrial markets.

The second change is **the weakening of the relative attraction of raw material sources for industrial allocation.** This factor also relates to

the decline of the cost primary raw materials as a percentage of the value of total manufacturing production.

Chinitz and Vernon state: ⁴⁾

"The reason why raw material locations no longer exert so strong a pull on plants are not at all obscure. For one thing, raw materials no longer figure as importantly in the production process of the average plant as they did a few decades ago. The chain of processing between raw materials and final products has been growing longer and longer. As a result, in increasing degree, plants hold down their freight-in costs by location near other plants, not near a raw material source."

The third important change is **the growth of manufacturing-service industries.** These repair or adjust capital equipment and consumer durables, and use raw materials in the form of components and accessories, some of which are self-produced.

A factor which is closely linked with this type of industry has been the noticeable tendency among consumer goods industries over the years to depart from a few staple lines thus offering wider choice in colour, style, packaging, and accessories.

Another important factor contributing to this trend is the decline in transport costs. The introduction of motor transport and air-travel, constantly reduces the importance of transport in the total cost of a firm thereby diminishing its significance as a factor determining location.

The Toothill Committees, studied the effect of transport costs for a firm which had chosen a location in Scotland. Its findings were that the costs amount to less than 2 per cent of the total, a figure which they considered insignificant. Similar conclusions were made in France.⁶⁾

We must interpret this conclusion carefully⁷⁾ * The decline here, applies to those firms situated in the larger industrial centres. With an increase in the local market

* These studies have shown that businessmen are nonetheless influenced to a significant extent by the factor of distance in choosing a new location.

they are able to utilise economies of scale advantages. Technological development in transport helps these firms to increase their markets outside the main centres. For this reason one finds that a firm situated in Johannesburg will, because of the introduction of road transport, find competition in Welkom easier. A Welkom firm, with its small market, will in turn find it more difficult to compete in Welkom, and has no chance of competing in Johannesburg.

ECONOMIC THEORY IS NO GUIDE FOR THESE TRENDS

Economists tend to ignore the location theory, this aspect of economics being very undeveloped. In the Post War years however they were more interested in economic growth — i.e. “what” we are going to do — without asking “where” we are going to do it.

The basic philosophy of most economists is to leave the “where” factor to the free play of market forces or mechanisms. This philosophy allows the factors of production to flow to the location where they may best be utilised. Because of this approach, we should allow the continuance of the concentration of economic activities. Economists therefore find it difficult to answer such questions as: At what level of industrialisation can one start to decentralise? Is it more advantageous to remove slums and provide basic facilities for migrants, than to take industries to the underemployed and unemployed pockets? Perhaps the most important question of all is: What are the costs/benefits comparisons between concentration and decentralisation?

Gavin McCrone⁸⁾ states:

“Thus much effort, which might usefully be devoted to designing an effective policy, is spent in debating the economic merits and demerits of having a policy at all. This is rather a pointless exercise, since the lack of data which makes it hard to prove the case for regional policy on economic grounds also makes it hard to disprove it.”

The point I wish to make is that decentralisation is not a purely economic issue — economists

are inclined to make this mistake. We cannot consider the issue properly without referring to political and social factors as well. This does not mean that economics is of no importance. Economists have a particularly significant role to play in decentralisation — even if justified solely on political and social grounds. Decentralisation is concerned with the change in the pattern of a country's development. We must base all possibilities on economic reality.

WHY DECENTRALISE?

1. Will the best distribution of manufacturing industries be attained if it is left to free market forces? The Royal Commission of Distribution of Industrial Population⁹⁾ (and a recent number of articles devoted to this subject) came to the following conclusion with regard to economies of decentralisation:

“That free market forces cannot be relied on to operate satisfactorily on the location decisions.”

Its first objection to the free market mechanism as a regulator of location decisions is the behaviour of businessmen. They tend, when deciding on the location of a firm, not to follow the scientific approach but usually decide in a very haphazard way. Psychological factors sometimes play a more important role in location decisions than costs do.

Our second objection to the free market mechanism as a regulator in location decisions is that it depends on a process of “trial and error.” In location decisions which require a great deal of fixed capital investment a considerable time elapses before a mistake is detected and then corrected. Colin Clark¹⁰⁾ states:

“The essential concept of the free market is trial and error... But can you say that this is a valid method of control in matters where you may have to wait two centuries before all the consequences of a decision are apparent?”

2. The second aspect mentioned is that economic growth requires a policy to ensure that the economy's spare resources are utilised as far as possible. Even if we allow the labour to flow freely to the cities we are still faced with the

problem of un- and under-employment in undeveloped areas. A decline in the *per capita* income of workers may be the outcome in these depressed areas, for families prefer to remain together and the result is an unplanned system of migrant labour. This causes a low productivity. We also find that people who migrate to the cities are usually the most enterprising and their departure makes it more difficult for us to employ the rest.

3. The third aspect mentioned is the problem of regional balance and the avoidance of inflation. Disparities in regional economic conditions may affect the nation's ability to control inflation. It may be impossible to employ general fiscal and monetary measures which avoid both excessive inflationary pressure and an unacceptable rate of unemployment. It can also assist in inflation when large numbers of workers' families flow to the main industrial centres. In the initial stages, however, their productivity is very low although their requirements for transport, housing etc. are nearly equal to those of the older tax-paying inhabitants of the city.

4. The fourth aspect mentioned is the cost of economic concentration, the main costs here being those of congestion. In larger urban areas, the population tends to travel greater distances which requires an increase in transport facilities.

The costs of essential public services rises per head of population and costly subventions are required from the State. Clark¹¹⁾ in his investigation of city sizes in America, Britain and Australia concluded that a city with between 100 - 200 thousand inhabitants is able to supply the full range of commercial services. On the other hand, he found that a city with a population of between 200 - 500 thousand was necessary for full development of the manufacturing structure.

Lomax¹²⁾ estimated the optimum city size as between 100- 200 thousand and according to him a population of over 300,000 will cause the cost of municipal services per head to rise sharply.

Neutze¹³⁾ who based his research on Australian data came to the conclusion that medium-sized centres in the range of 200,000 - 1 million offered the most advantages.

Gavin McCrone¹⁴⁾ points out two of the

disadvantages of decentralisation, firstly expansions or new firms which are prohibited in the main cities may be unable to expand to decentralised areas. The result is a decline in growth. Secondly, the location of industries in sub-optimal locations where costs are high could stimulate inflation to the detriment of a country's competition in foreign markets.

I have already stated that decentralisation is not only an economic but also a political and social problem. In South Africa politics plays a very important role, probably more so than in most other countries.

On the social issue McCrone¹⁵⁾ states:

"For a variety of reasons the population is likely to prefer to be employed in its own region, and this preference may be particularly strong if there is some feeling of regional consciousness based on cultural or linguistic differences. The aim of the States should certainly not be the promotion of economic efficiency for its own sake, but rather the greater welfare of its citizens."

BRITAIN SUCCEEDS

McCrone¹⁶⁾ on regional policy in Britain states:

"One may expect the regional problem in its present form to be gradually overcome. Though many countries now apply regional policies, there are few where such a claim could be made with confidence."

Though development areas in Britain contain approximately 20 per cent of the nation's population, these areas in recent years acquired nearly half of the new employment created by projects for which Industrial Development Certificates were granted, or one-third of the factory buildings in terms of floor space.

Britain's policy is to take the factory to the worker and not vice versa.

By the introduction of Industrial Development Certificates and building licensing, the British Government effectively controls industrial expansion in the prosperous areas of the country. At the same time it provides greater incentive for those firms located in depressed

areas. In the first three years of the operation of the Local Employment Act, 1960, the average gross outlay per estimated job was just under R1800.

Needleman and Scott¹⁷⁾ conclude "that the corresponding increase in output (with increased employment) would far outweigh the cost of State intervention."

More recently, the French¹⁸⁾ have successfully restrained the rapid economic growth in the Paris region. The proportion of France's industrial buildings (measured on the basis of floor space) constructed in the Paris region, fell from 37% in 1955 to 13% in 1961. The proportion of the jobs created decreased from 34% to 6% in the same period.

With regard to Britain's "push-and-pull" policy I would like to mention the comments by Prof. Chinitz¹⁹⁾, who is at present Secretary of the Area Development Programme of the United States Departments of Commerce. In a study of Britain he concluded that —

"locations should not be evaluated in terms of the number of jobs provided, but rather in terms of the administration effect and the generation of external economies. The persistence of high unemployment in development areas should not be taken as evidence that regional policies are not effective. The acid test is relative growth in per capita output, which may or may not be accomplished by a reduction in unemployment."

HAVE ONLY BIG CITIES AGGLOMERATION ADVANTAGES?

In the first two sections of my paper I stated that it is advantageous for a firm to be located in one of the larger cities. I also pointed out that the general trend is towards greater concentration. **Perhaps we may conclude that agglomeration factors are today the most important location factors.** I have also come to the conclusion that notwithstanding the advantages for individual firms of locating in the main metropolitan areas, decentralisation is necessary for political, social and economic reasons. Britain succeeded by means of her "push/pull" policy in the attainment of a higher growth rate in

depressed areas. In Britain this policy is successful because the majority of the agglomeration advantages are to be found in depressed areas. Britain is a small country with many big cities. South Africa on the other hand is a big country with few large cities and great distances between them. Here we are faced with the problem of high transport costs and what is termed "distance cost". By "distance cost" we mean the cost to be away from the agglomeration factors at concentrated points. Distance costs are really the same as economies of agglomeration in reverse.

We are presently pursuing a policy of promoting growth points by means of "pull and push" measures. Apart from the South African policy of promoting decentralisation, I wish to emphasize one point in particular, namely agglomeration factors. We must try to effect a flow of agglomeration advantages from the main metropolitan areas to some growth points nearby.

The economic choice of an over-all location pattern must not be between a "centralised" and "depressed" pattern but rather between alternative centralised patterns. This is the "growth pole" approach. To develop agglomeration advantages we must cut the distance costs between different growth points. It is therefore imperative that growth points are planned in such a way that we have good communication between growth points and the main cities.

According to an article prepared by UNIDO²⁰⁾, regional development strategy proposed for Venezuela would be to concentrate public infrastructure investment in metropolitan regions and development corridors, strengthen the core regions of the periphery, encourage outward migration from declining areas, and reduce the rate of urbanisation by drawing the mountain people to agricultural frontier communities.

Good roads and other transport facilities, telephones and any other communication factor must therefore play a principal part in South Africa's policy of decentralisation in order to decrease "distance costs."

This policy must envisage a minimisation of transport costs and time to such an extent, to enable the entrepreneur at any growth point, to utilise the advantages of economies of scale.

A good communication system is a prime requisite for the development of inter-industry economies between the different growth points. A producer of motor components for instance must find it economically viable to locate in Pietersburg, at the same time supplying motor assemblers in Rosslyn.

A policy such as this could be initiated in a sequential way by first developing, for example, the Pretoria/Brits/Rosslyn/Groblersdal/Hammanskraal system.

It has been proved that after a certain stage such a system will become, from a location point of view, economically viable. The Government may then advance to another system²¹⁾ *. This approach allows the agglomeration advantages to flow from one mature system into an undeveloped system. No growth point develops in isolation. McCrone²²⁾ has stated:

"Any disadvantage which a firm experiences in operating in a particular place, is at least as often due to lack of facilities or external economies as to the enduring features of the location itself. Such deficiencies can be remedied and this is one of the prime functions of regional policy."

WHAT CAN THE WITWATERSRAND COMPLEX CONTRIBUTE?

According to available information, in 1969 the Witwatersrand complex contributed R3,939 million or 55,6% to the total value of production of the manufacturing industry, which was estimated at R7,090 million. As mentioned in the previous section, the industries which supply the inter-industry demand, tend to concentrate in the main industrial areas. According to preliminary statistics most of South Africa's intermediate industries are situated in the Witwatersrand complex. It is estimated that the value of sales of intermediate industries amounts to R2,080 million or 53,0% of the total compared with the South African value of production of R2,133 million.

I wish to point out that my statistics for the Witwatersrand area may also include the

value of production of some of the basic raw material processors. In this intermediate group the producers of semi-processed materials for further processing, capital equipment and parts and spares, respectively contributed 15,9, 15,2, and 12,0 per cent to the total value of sales.

In analysing the markets of these intermediate industries we find that producers of semi-processed materials for further processing sold 33,6 per cent of their sales to manufacturing, 16 per cent to construction and 14 per cent to government and provincial administrations. In the case of parts and spares 42,7 per cent was supplied to mines and 28% to manufacture.

We shall now study the other contributors to the total value of sales:

The most important group is the producers of final products which contributed 43,4 per cent to total sales. The main item here is the producers of semi-durable consumer goods which contributed 26,5 per cent to the total value of sales; non-durables contributed 8,8 and durables 4,3 per cent. For my purposes the most interesting aspects are their location characteristics, which I have divided into:

1. Transport local sensitive
- ii. Transport national sensitive (with a large percentage of Bantu employed)
- iii. Transport national sensitive (with a small percentage of Bantu employed)
- iv. White skilled sensitive and
- v. Agglomeration sensitive

In transport local sensitive industries we find firms which buy or sell almost all their raw materials in the Witwatersrand complex or those firms which are inherently classified as local sensitive industries. Examples here are the manufacturers of concrete blocks, reinforced steel, mineral-water wooden boxes, bakers, abattoirs.

In the case of the second group, (transport national sensitive) which employ a large percentage of Bantu, we find that a large percentage of raw materials is bought and sold outside the Witwatersrand complex: Examples here are floor

* "There is evidence from the highly developed nations that, as economic development continues beyond a certain point, there is a renewed interregional decentralization trend, because of the growth of demand in more and more regions of the country up to the point necessary to provide sufficient markets for plants of efficient size."

polishes, pharmaceutical products, mens' and boys' underwear, and refrigerators.

The third group resembles the second except that here a small number of Bantu are employed: Examples are cast iron, piston-rings, leather products, girls' and ladies' outerwear garments and radio transmitters.

The fourth group is the white skilled sensitive industries which includes polished diamonds, diamond drill points, special tools for engineering, precious jewelry and compressors.

The last group is agglomeration sensitive industries which include all the small firms that sell and buy in the Witwatersrand complex. Here I have also included dry-cleaning, tyre retreading, rubber stamps, bespoke tailoring, dyeing of yarn, etc.

If we divide the total sales of all manufacturing industries in the Witwatersrand complex between the five groups we find 33,3 per cent in the first group; 31,3 per cent in the second; 14,7 per cent in the third, 15,3 per cent in the fourth and 7,4 in the last group.

With regard to employment the percentages of total employment for the five classes are respectively, 28,9 31,8, 19,3 9,0, and 11,0 if we compare these percentages with the percentages contributed by the five groups to total sales, we find that the transport local sensitive and white skilled sensitive industry groups have the highest sales per worker. In the transport national sensitive (small percentage Bantu) and the agglomeration sensitive industry groups the sales per worker is relatively much lower.

According to the Riekert Report, all firms with a ratio of more than 2,5 black persons for every white person are severely restricted. According to my classification there are only two big groups which employ more Bantu than necessary, namely national transport sensitive industries, where a large percentage of Bantu are employed with a ratio of 1:3,7 and the small agglomeration industries with a ratio of 1:2,7 This covers a total employment of 187 483.

Personally I believe that the Government should exempt these small agglomeration firms from too strict control. In analysing the above information in more detail we find that semidurables in particular transport national

sensitive industries (large percentage Bantu) employ a large number of Bantu (22 000) - (a ratio of 1:6,1). A close second is durable consumer goods with Bantu employment standing at 11 000 (a ratio of 1:5). The third group is the semi-processed materials for further processing with 16 000 Bantu and a ratio of 1:4,4.

The two groups in transport local sensitive industries, namely non-durables and parts and spares have poor ratio's 1:3,5 and 1:5,3 respectively.

An estimate of total employment which is unable to satisfy the Government's present policy shows a figure of 161 000. If we subtract the employment in transport local sensitive and agglomeration sensitive industries from the above figure, we are left with 92 000 employees, or 21 per cent of total employment.

BANTUSTANS MAY HAVE TO PURSUE POLICIES OF PROTECTION

As stated in my introduction, those industries under the free play of economic forces, tend to flow to the main industrial centres. Hirschman^{2,3} sums up his arguments as follows:

"If we could in some respects treat a region as though it were a country we would indeed get the best of both worlds and be able to create situations particularly favourable to development."

McCrone^{2,4} also urges strongly that depressed areas should promote development by trying to emulate some of the policies which individual states pursue under the same circumstances. McCrone mentions policies such as the use of the exchange rate, tariffs, national barriers to factor movements, all of which pursue their own policy for industrial development. He goes on to mention the disadvantages of overprotection, the most important being the possibility of regional industries not using the economies of scale whereby advantages of specialisation may be lost.

On viewing these arguments I feel we should prepare ourselves (and perhaps even assist the Bantustans) for developing the Bantustan's own economic policies in order to assist regional development. The possibility exists that they might develop tariff barriers against our

products and we must therefore allow free inflow of their products. If such policies do develop we shall be forced to ask the question: What about the future of the border area industries? Will these industries remain under the control of the white economy or, in certain instances, will some of these industries become part of the Bantustans? We cannot answer this question now, — the future will tell.

In conclusion, the policy of decentralisation of industries must be part and parcel of a general policy of industrialisation and growth of national income. Politically we have come to accept Bantustans — why then can we not also accept an effective policy of decentralisation of manufacturing industries?

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