

# THE RHODESIAN JOURNAL

*of*

## ECONOMICS

The Quarterly Journal of the Rhodesian Economic Society

Editorial Board:

A. M. Hawkins (Editor), M. S. Brooks, M. L. Rule, P. J. Stanbridge  
and P. Staub.

### INDUSTRY IN RHODESIA

#### A TWO-DAY SYMPOSIUM

#### PART TWO

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PAPER No. 10

Dr. L. P. McCrystal

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## DISPERSAL OF ECONOMIC ACTIVITY AND INDUSTRIAL DEVELOPMENT

L. P. McCRYSTAL

### Introduction

Ever since Lord Keynes propounded his "General Theory", it has increasingly come to be held that man is not merely a cork on the economic ocean, being flung this way and that by blind economic forces, but that he can determine his economic condition. It is this newer view, that we are no longer entirely creatures of our economic circumstance, but are indeed in a position to "create" our own future to some extent, that underlies the thinking on dispersal of economic activity. We feel capable of guiding economic forces into directions which will build an economy more closely resembling that which we want rather than being prepared to accept the economy which free market forces build for us.

Not only do we want to "create" our own future insofar as this is possible; we also want, each one of us, to feel that we have a "place in the sun"—that we count for something in the general scheme of things. However, with the increasing sizes of cities and the concomitant massing together of vast hordes of humanity, it is suggested that many people may experience a disquieting awareness of some loss of their worth as individuals. Indeed, the struggle to find that place in the sun seems to increase in difficulty the more people there are who have to be pushed out of the way in the process.

Free market forces always tend to produce an increasing concentration of economic activity at a few locations. An effect of this is that it may leave a substantial proportion of the available resources of the economy un- or underutilised. Thus, whereas the resources of the city regions become stretched and distended under the strains placed upon them by the forces of growth, economic slack may exist elsewhere in the economy. One is tempted, indeed, to postulate a theory that the process of concentration of economic growth is inherently inflationary by virtue of the stresses which it occasions at particular points in the economic system.

In developing countries, with a large proportion of the population living at a relatively backward and subsistence level, there is an added difficulty. The inhabitants, ill-equipped for life in a modern economy as they are, nevertheless are attracted to the cities like moths to a candle, with results which are not entirely dissimilar from those which befall the moths. Great economic and social stresses are set up. These lead to economic, sociological, political and psychological difficulties that are well known. In order to avoid the sudden impact of the change from a primitive to an advanced economy, a theory of gradualism is suggested whereby the people are slowly acquainted with the industrial environment rather like a bather who wishes to enter the icy water without suffering heart failure.

These are some of the thoughts which have underlain the attempts made in various countries around the world to spread economic activity more widely. Most of them amount to taking from the "haves" to give to the "have-nots"

—a principle which appears to be enshrined in much of modern thinking on socio-economic policy and is practised for example in taxation.

Before leaving this general background, I should like to be clear on the use of terminology. By “decentralisation” I mean the spread of a metropolis within an area of roughly a fifty-mile radius from the centre of that metropolis. This is a normal tendency in the space economy. A factory sited say at Norton would thus constitute decentralisation within the Salisbury metropolitan region on this criterion. By “dispersal” I mean the location of economic activity in areas beyond that roughly 50-mile radius. Economic development at places such as Gwelo or Que Que would thus constitute dispersal on my definition.

It seems to me that it is essential that this distinction should be made if we are to have any understanding of the processes involved in the evolution of the space economy. The reason for choosing a 50-mile radius as the dividing line between decentralisation and dispersal is a practical one. This is the approximate limit at which a factory can be effectively controlled from a head office located at a central place. It amounts to roughly one hour’s driving time and, from experience, this appears to be about as long as the average managing director is prepared to sit in his car to travel from his office in the city, where his administrative and selling teams would be located, to his factory in some industrial estate.

### **Economic Growth Patterns and the Process of Regional Economic Growth**

There is a tendency for the economic structure of countries to become increasingly dominated by secondary and tertiary activities as they mature. This is reinforced by virtue of the fact that, with greater advancement, natural resources become less significant to industrial development whilst the “man-made” resources created in the areas of concentration, grow in significance. To a great extent this is due to the increasing “roundaboutness” and complexity of production, with the output of capital goods and industrial material inputs increasing in importance. Inter-industry relations thus become increasingly significant in the locational decisions of entrepreneurs.

Since these inter-industry relationships expand with the advance of economies towards maturity, the importance of industries being close to other industries tends to increase. At the same time, the importance of being close to markets for final uses tends to decline as the proportion of industrial output being absorbed by final use sectors falls towards the level attained in the more advanced countries.

The question arises as to where the concentrations of industries should take place. If final markets are growing relatively less important then presumably those firms which cater for inter-industry demand need not be where the end-consumers are. On the other hand, because industries appear to be relying to a decreasing extent directly upon natural resource inputs, the inter-industry producers are largely freed from the basic resource bases as well.

The fact is that the industrial development of specific regions is an evolving process. Because the first industries which set the process of regional economic growth going, attract people, and therefore also market orientated industries, those industries which the newer manufacturers of intermediate goods serve, will already be located where the population concentrations are. Consequently the producers of intermediate goods also go to the major population centres. Moreover, the sources of material inputs, even for producers of intermediate

goods, are increasingly being obtained from other industries which are attracted to the area by the industrial market available there. Thus there results an industrial cluster which provides both material inputs and markets for intermediate goods, superimposed upon and in close proximity to the original population concentration. This is, in short, the cumulative process of concentration of economic activity which has been observed in regions all over the world.

It must consequently be concluded that the normal economic forces, when left to themselves, tend to produce an ever-increasing concentration of manufacturing activity, and therefore of population and services. This concentration may be expected to continue at least up to an advanced degree of economic maturity.

#### **Cumulative growth may produce adverse effects**

The cumulative growth at particular locations tends to have an adverse effect upon those regions in the economy which are not endowed with centres of concentrated economic activity. The leading, dominant metropolitan regions grow from strength to strength whilst the lagging regions get caught up in a vicious circle of poverty or "downward circular and cumulative causation" as Gunnar Myrdal has called it.\* In the process, these lagging regions grow relatively less attractive to both entrepreneurs and the more enterprising workers. This gives rise to a downward spiral which manifests itself in such phenomena as the depressed areas of the U.S.A. and Britain and the relative lack of economic development in areas outside the major centres in Rhodesia. Myrdal summed this up in these words:

"That there is a tendency inherent in the free play of market forces to create regional inequalities, and that this tendency becomes the more dominant the poorer a country is, are two of the most important laws of economic under-development and development under *laissez-faire*."†

The fact that even a wealthy economy such as the U.S.A. experiences difficulties in the form of its depressed areas, as a result of the phenomenon described by Myrdal, shows how persistent it must be. The point as far as we in Southern Africa are concerned is that, unless deliberate steps are taken to alter this tendency, we cannot expect our less developed regions to develop. The extent to which the process has already gone in Rhodesia is revealed by the fact that, of the most enterprising section of the population, i.e. the Whites, nearly 64% live in only two cities.

The standard solution of transferring resources out of the less developed regions would perhaps be more acceptable if it could be said that the distribution of the established metropolitan regions conformed closely with the resources available in the economy. This is not necessarily so however. Pure chance might dictate the settlement of a particular area. Once such a settlement becomes an established centre and gathers momentum in its growth, it gains a predominance over other areas which are settled later on. And even though these newer areas may be better endowed with natural resources, the predominance of an already established centre is extremely difficult to overcome.

The high degree of chance inherent in the free play of economic forces, whilst not too serious in cases where decisions are readily reversible, can have

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\* G. Myrdal: *Economic Theory and Underdeveloped Regions*, Methuen & Co. Ltd. 1963.

† *Op. cit.*, p. 34.

far-reaching consequences over long periods in the space economy, where adjustments to changed circumstances can take many decades to work themselves out. Indeed, taking this possibility together with the cumulative process noted by Myrdal, it can easily be envisaged that the spatial structure of the economy could diverge from that which would maximise returns to the available inputs.

Moreover, as I found in a country-wide survey of locational decisions by industrialists in South Africa, ignorance on the part of entrepreneurs of the relative merits of alternative areas away from the major urban concentrations, and sheer inertia, can contribute to the maldistribution of economic activities. Hirschman also makes the point that the external economies available in the metropolitan areas, though real, are consistently over-estimated by entrepreneurs.\*

### The Economics of City Size

Given the proposition that most economic activities must concentrate in order to be able to function effectively, it is instructive to examine both the sizes of centres which are required for efficiency and the types of economic activities which find it essential to locate in these centres. This question of city size must be viewed from both the social as well as the private side.

As far as the administration of cities is concerned, there is evidence to suggest that operating costs per head of population rise rapidly once the city passes a size of 300,000. This may well be in part due to the fact that cities of this size become regional centres and must therefore cater for an influx of people who do not live in the city.

Nevertheless, economic reasoning on the limits to the growth of the firm suggests that there must be some size beyond which marginal costs begin rising. Dr. Nicholas Kaldor suggested that it is that part of the entrepreneurial function which is concerned with co-ordination, that brings this about.† The management of cities involves co-ordination just as much as does the management of a firm. It therefore seems reasonable to expect rising marginal costs with increasing size in the case of cities as well. The population size of 300,000 is suggested as a first approximation of the stage at which rising costs may begin operating. I have not studied the position in Rhodesia, but I should imagine, on the basis of my hypothesis, that Salisbury, with an estimated 390,000 inhabitants, is experiencing the tensions of rising *per capita* costs. If it is not, I should be most interested to know how it is avoiding them!

An interesting study in the Italian Mezzogiorno published recently, investigated the capital costs of building and servicing cities of various sizes. It would appear that, apart from small centres with fewer than 5,000 inhabitants, the lowest *per capita* costs were achieved in the city size range 100,000–250,000.

As far as the alleviation of street congestion is concerned, the balance also comes down on the side of the smaller city. It is obvious from the theory of economic rent that the larger does a city grow, the higher do land prices become. This means that the costs of expropriating land to widen streets and

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\* A. O. Hirschman: *The Strategy of Economic Development*, Yale, 1958, p. 185.

† N. Kaldor: "The Equilibrium of the Firm". *Economic Journal*, Vol. XLIV, March 1934.

build freeways tends to vary directly with city size. A recent Australian study\* also showed that each new resident would cause an increase in traffic congestion costing present residents, per new resident per annum:

- \$A 64.8 in Sydney—population 2½ million.
- 4.0 in Wollangong—population 163,000.
- 0.1 in Wagga Wagga—population 26,000.

These figures give some idea of the burden which increasing concentration of population in a large city places upon road users in general, compared with the position in a smaller centre.

The problem here is that, as so often occurs in the economic world, the cost to the individual is less than the cost to the community at large. The marginal road user who, by adding to the congestion on the roads, raises the marginal costs of all road users, bears only the average cost. Although this is higher than it was without him, it is nevertheless lower than marginal social costs. Since the individual, whether he be the head of a firm or the head of a family, considers only his own costs, he is not faced by as wide a difference in transport costs in the large city compared with a smaller town as was reflected in the Australian study of social costs.

#### Private Costs

So much then for social costs where the evidence favours the smaller city, e.g. below 300,000. As far as private firms are concerned, there would appear to be no upper limit to the size of city they prefer—the bigger the better as far as most businesses are concerned. However, closer analysis reveals that this is not necessarily so for all firms.

Certainly the new firm, having to rely heavily on sub-contractors and suppliers of specialised services, and wanting to make itself known to as large a market as rapidly as possible, needs must locate in a metropolitan area to survive its early formative years. This is, indeed, probably the reason why the large cities are the nurseries of new firms. In addition the small concern also benefits substantially from the services and other facilities which it can obtain outside of itself in a large city—the so-called external economies.

However, it is suggested that as firms, and I refer here primarily to manufacturing activities, grow larger, the economies which they obtained outside of themselves, are increasingly internalised. Thus the need to be in a large metropolis grows weaker. They are then attracted to the metropolitan areas largely by the specialised skills available there. This is borne out by a study published by the United Nations Economic Commission for Europe in 1967, which stated that “in the past 30 years one of the most important changes in the field of industrial location can be described as the growing role of labour problems and the diminishing role of transport costs”.† Thus if a large manufacturer, who is a producer of goods for inter-industry demand, could attract the necessary labour to a location where there is a cluster of industries with which his concern is linked, it would not be essential for him to locate in a

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\* G. M. Neutze: *Economic Policy and the Size of Cities*, Australian National University, 1965, p. 58.

† Economic Commission for Europe: *Criteria for Location of Industrial Plants*, United Nations, 1967, p. 5. See also S. Hirsch: *Location of Industry and International Competitiveness*, Clarendon Press, 1967, Chapter II, in which a theory of phases in the growth of firms is postulated. External economies, important in the early phase, are thought to grow ever less important in subsequent phases as the firm matures.

metropolitan area. Thus for non-end-consumer orientated industries, a location in a large metropolitan area is not an essential requirement. This is an important conclusion from a policy point of view and I shall return to it later.

As far as service activities are concerned, there is a strong need to be in a large centre. Probably the more specialised the service the larger is the city it requires to support it.

In sum then, it appears that increasing city size is of greatest benefit to small, new, and end-consumer orientated manufacturing concerns, as well as to many service activities.

People as workers tend to favour increasing city size. This is because of the range of job opportunities available and possibly the feeling that the chances of being out of work in a large city are considered to be less than in a smaller city with a narrower range of opportunities.

An adequate range of consumer services and shopping facilities can be provided by medium-sized cities. Prof. Colin Clark has shown that an adequate range of consumer services for frequent requirements can be provided in a city of 100,000 to 200,000.\* Duncan, in an analysis of shopping facilities in the U.S.A., showed that no more than 3 of the 65 kinds of retail outlets listed in the census of retail trade appeared to require a population of over 50,000.†

Clark also estimated that a full range of educational facilities, up to University level, could be supported by centres with populations of 175,000-200,000, whilst it is suggested that recreational facilities requiring populations of over 300,000 would be used only by a very small proportion of the population. An adequate range of entertainments could be supported by cities in the 200,000-300,000 size group.

#### Cities within cities

It would appear then that as far as consumer services and recreational facilities are concerned, the growth of cities much beyond 300,000 would produce what amounts to cities within cities. The exceptions to this are the more specialised types of activities which cater for only small but influential proportions of the population.

Sociological factors such as crime and public safety tend to deteriorate with increasing city size.‡ In addition, if factors such as home ownership, marriage and illegitimacy can serve as indicators, it appears that family life also deteriorates with increasing city size.

I would think that populations equivalent, *in economic terms*, to those which I have quoted, would be higher in South Africa and Rhodesia. South Africa's urban *per capita* incomes compare quite favourably with incomes in many parts of the world, so that the raising factor would not be as high there as in Rhodesia.

Looking at this composite picture of the implications of city size which I have attempted to present, there is a very real conflict. As far as social costs

\* Colin Clark: "The Economic Functions of a city in relation to its size". *Econometrica*, Vol 13, April, 1945.

† O. D. Duncan: "Optimum size of Cities" in P. K. Hatt and A. J. Reiss: *Cities and Society*, The Free Press, 1957, p. 769.

‡ See for example M. B. Clinard: "The Relation of Urbanisation and Urbanism to Criminal Behaviour", in E. W. Burgess and D. J. Bogue (eds.): *Contributions to Urban Sociology*, University of Chicago Press, 1964.

are concerned, the smaller city has the advantage over the larger. As far as certain types of businesses, and people as consumers and workers are concerned, the feeling is, the bigger the city the better. At the sociological level, however, the balance seems to lie in favour of smaller cities.

Policy-making is largely the art of weighing up conflicting interests such as these and striking a balance.

The weight attached to each will vary from country to country. In Rhodesia's case, for example, I would imagine that great weight would be attached to the capital costs of a dispersal scheme as against the costs of accommodating the same amount of growth within existing centres. It is impossible for a single individual to do this kind of weighing up. However, as a hypothesis I would like to suggest that cities in the region of 300,000 would produce the least conflict between the various interests involved. Clearly it would be neither practical nor desirable economics to stop the cities which are already larger than this, from growing. But by diverting as much growth as possible to new centres, the rate of growth of the very large centres could be slowed down, making it easier for them to cope with their own problems, whilst at the same time, the locations for the new centres could be so chosen as to improve the efficiency of the space economy.

The normal business solution to an ever-increasing size of the business unit, which is to decentralise the decision-making function to sub-units, is apparently not available in the space economy. Unguided market forces do not produce a condition where discrete urban concentrations are formed spontaneously once diseconomies in the operation of the existing large centres become apparent.

The reason for this is that the creation of new centres does not lie within the competence of the management of existing centres, as is the case in an individual firm. The only management body in the country to which the establishment of new centres remains an "internal" matter, is the central government. In terms of reducing diseconomies in the operation of the space economy, it is therefore for the central government to create the new urban centres in order to disperse the decision-making function at local level.

### **The Dispersal of Economic Activity**

I have argued that there is a conflict between the social costs and benefits of increasing concentration on the one side and the private costs and benefits on the other. Such factors as the cumulative urbanisation at a few points which sucks the rest of the country dry of its best human material—Rhodesia presents a good example of this; the neglect of resources away from the metropolitan regions; the rising costs of management of very large concentrations; the divergence between social and private marginal costs; and the need to align the space economy more closely with the requirements of changed economic circumstances than the chance settlements of the past have done, all contribute to the conflict.

Prof. W. A. Lewis who is among the keenest observers of modern economic development, had this to say on this subject:

"Without much loss of production or cultural values, and perhaps considerable gain in other directions . . . (it should be possible) to keep down the number of towns with populations exceeding 100,000. It will always be necessary to have some 'Ruhr' areas, where the presence of fuel and ores is exploited in vast industrial areas with large populations.

The danger is that such areas tend to attract other industries to themselves, which could be developed in other places without much loss.\*\*

I would be chary of going as far as Lewis by putting the figure at 100,000, except in special cases, as this might entail the loss of substantial economic benefits. A figure of 300,000 inserted in place of the 100,000 would seem to have more in its favour.

The arguments against this point of view turn largely upon the basic philosophy that to achieve what I have suggested would entail interference with the free play of economic forces and who, after all, could, as Adam Smith put it, have the "folly and presumption enough to fancy himself fit to exercise" such power? This not only touches on the whole issue of *laissez faire vis-a-vis* intervention in the market place. It is also very important in the context of economic development since the rate at which the economy grows could be at stake.

The argument for freedom from intervention seems to me to be at its strongest where decisions are fairly readily reversible should mistakes be made and where there is a high degree of mobility in the economic system. These are, indeed, part of the prerequisites underlying the notion of free competition, upon which large numbers of economists have in fact based their case when opposing intervention in the market place.

In the space economy there is little evidence of the conditions for perfect competition being satisfied. In fact it would, I think, be almost impossible to construct a theoretical model encompassing space. If, for example, the model were to be so constructed that the area in which a product is to be sold, is divided into separate markets to take account of variations in price with varying transport costs, then the condition of a large number of buyers and sellers in each market is not satisfied. If, on the other side, the area is treated as one market, then the variations in price resulting from transport costs would need either to signify non-uniformity of the product or a uniform product in a persistently imperfect market. Neither of these alternatives could be regarded as satisfying the perfect competition assumption.

#### **Does free competition produce best results**

If be added to these difficulties the ignorance on the part of the entrepreneurs of the relative merits of alternative locations, as found in various surveys, including the one which I undertook in South Africa, it can be seen that a free system can produce results in the space economy far removed from the optimum postulated by the perfect competition model. Yet despite these difficulties, I suspect that much of the opposition to intervention aimed at guiding the location of economic activities, is based on the assumption that free competition produces the best economic results.

This is not to argue in favour of discarding the market mechanism in determining location decisions. This would indeed amount to throwing out the baby with the bath water. What can be done, however, is to work via market forces so as to slow down the process of cumulative concentration of economic activity much as is done when the monetary authorities attempt to inhibit the cumulative process of inflation.

Of critical importance to a developing country such as Rhodesia is whether given the scarcity of resources, a policy of dispersal aimed at attracting economic

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\* W. A. Lewis: *The Theory of Economic Growth*, Allen & Unwin Ltd., 1955, p. 338.

activity to locations other than Salisbury and Bulawayo, would not inhibit the economic growth of the country. After all, as I have pointed out, there is a great deal of economic advantage to be derived by firms from locating in the cities.

The answer to this problem lies in such factors as the stage of development reached in the economy concerned, the spatial distribution of resources relative to the location of the urban concentrations, and the factors whose scarcity is most inhibiting to the growth of the economy.

Rhodesia is at a stage where primary activities, i.e. agriculture and mining, comprise one-fifth whilst manufacturing produces almost the same proportion of the Gross Domestic Product. The ratios are, in fact, very close to those of South Africa.

Looked at over the long term, the ratio of Rhodesia's agricultural and mining output to total domestic product, is likely to decline, with manufacturing activity increasing its proportion. Meanwhile, however, much manufacturing activity will be based upon the products of the primary sectors.

Furthermore, the need to draw the indigenous population into productive economic activities is as imperative a need in Rhodesia as it is in South Africa. Skilled labour is a perennial bottle-neck to the achievement of greater economic growth, and it is therefore necessary to increase the skills of the African population.

These needs can be met either by bringing both materials and unskilled labour to the existing cities and carrying out all the processing, refining and improving there, or by encouraging dispersal so as to undertake at least some of these activities *in situ* as it were.

The first alternative may well economise on private capital but it will probably place a heavy burden on public capital resources whilst also forcing a heavy social burden on to the African population. The latter alternative would probably ease the burden on the public capital available to local authorities, whilst placing a greater burden upon government, but reducing the human strain arising from introducing primitive people to a sophisticated economic environment.

As I said earlier, these are issues which have to be weighed up in the scales of policy-making to determine where most advantage lies. There is much to be said for either approach under Rhodesian conditions where the diseconomies arising from the vast urban sprawls of Europe and North America have not yet manifested themselves. It is as well, however, to bear in mind the undesirability of such conditions, particularly in the relatively under-developed economic conditions prevailing in our part of the world, and to take early steps to avoid their coming about.

### **A Strategy for Dispersal**

Assuming that it is decided that a policy of dispersal should be pursued, it is then obviously very important that it should be so designed as not to produce a slower rate of economic growth in the short term than would be possible without such a policy, whilst in the longer term generating a higher rate of growth than would have been forthcoming without the policy.

Critical to the achievement of this is, in my view, the acceptance of a philosophy of concentrated dispersal or dispersed growth points. Too often one finds countries endeavouring to achieve dispersal in a diffuse manner, without attempting to focus attention on the precise places where they would

like to see the dispersal take place. This has resulted in a dissipation of effort with only limited success. As a result, the policy has fallen into disrepute.

Economic activity in Rhodesia will have to concentrate as the country enters a more advanced stage of development. This is so all-pervading a phenomenon that it can be stated as a law of concentrated economic development. Just as the laws of electricity can be applied to the benefit of man, so can this law be applied to the benefit of a dispersal policy. Once this is recognised, the task becomes one of selecting the place or places at dispersed locations where economic activity is to be concentrated. The importance of this part of the exercise hardly needs to be stressed.

The next step is to offer inducements to industries to locate at the chosen growth points whilst making it unattractive to selected types of industries to locate in the existing cities. There are many ways of achieving this. Since I believe that policies such as this should, as far as possible, be implemented via the market mechanism, I would favour a subsidy on labour and capital employed in factories located in the dispersed concentrations and a tax on additional labour taken on by the selected industries in the existing cities. There are other measures which can be applied in addition, but these would form the basis of the packaged deal. One major additional point which should not be forgotten is the need to make the new concentration attractive to the higher echelons of industrial management.

### Conclusions

The question as to whether a country should or should not pursue a dispersal policy poses, to those who attempt to answer it, some complex problems related to such factors as socio-economic policy, the stage of development reached by the economy, and the efficiency of the spatial economy as it is now and would be if it were changed. There is no doubt that new economic circumstances take a very long time to produce a response in the space economy. On this ground alone there is much to be said in favour of facilitating a greater degree of mobility in the economy.

Nevertheless, it is probably true to say that the answer to the question will vary from one time and one country to another. As in so many economic matters, the questions remain the same but the answers change! The main objective should, if the scales of judgment come down in favour of dispersal, be to ensure that the policy is implemented through the market mechanism with greater efficiency being the ultimate goal. If the economists and businessmen of the country can ensure this then they will have achieved all that can be expected of them.

### DISCUSSION OF PAPER TEN

Mr. Rule said Dr. McCrystal advocated taxing employment in the overpopulated areas and a corresponding subsidy to additional employment in the areas in which it was intended to disperse industry. Mr. Rule said he thought that there were several practical effects which might not be very satisfactory. He thought that there was a danger of wasteful investment and duplication.

Dr. McCrystal said that the policy makers had to decide whether the net benefits of dispersal exceeded the costs of continued crowding. He stressed that the selection of growth points would have to be done extremely carefully. He admitted that the tax would be discriminatory.

Professor Lombard said that in the metropolitan area of Johannesburg it had been noticed that as the unskilled labour force migrated to the urban area it offered itself at marginal wage levels. At these marginal wage levels they thought they would be able to make do forgetting the costs of housing, transport, education, etc. The result was that a tremendous cost was placed upon the Municipality of Johannesburg to provide these basic facilities. These costs are then recouped from Johannesburg according to the main source of municipal income but not from the manufacturers themselves paying the marginal wages. Thus there was a vicious circle. The more Johannesburg was prepared to subsidise these facilities, the more workers were prepared to offer themselves at marginal wages, and the more attractive Johannesburg becomes as a centre for industry because of these low wage costs.

Dr. McCrystal said he agreed. The need was to make the social cost (to Johannesburg Municipality) into a private cost. This should be done by charging a tax on the men who were in fact imposing this social cost on the community.

Mr. Girdlestone asked about Border Industries. To what extent did these reflect the benefits of moving away from the centres of industry or to what extent were they the result of seeking to raise living standards of the people in the Bantustans? Or was it a combination of both that mattered?

Dr. McCrystal said that the Border areas policy was aimed at acquainting the indigenous people more slowly with the effects of industrialisation. Instead of bringing them into cities, they were brought gradually out of the Tribal environment. This was basically the motive as well as giving work to people where otherwise they would not have found jobs and thereby also relieving them of the social burden of living in slum conditions in the cities. His thesis was therefore more sociological than economic. But the economic motive was to try and get industrialists to consider new locations other than existing metropolitan areas. It was a matter of sociological practice combined with the need to utilise resources more effectively.

Mr. Staub asked whether the question of dispersal did not involve close consideration of population density. After all, while it was one thing to talk about limiting population size to (say) 300,000 people there was also the fact that surely it made good sense to minimise overhead reticulation costs in these areas before moving on to other new locations where new overhead costs for water, electricity, telephones, etc., would immediately be incurred.

Dr. McCrystal said he thought that the danger was that a city would tend to grow outwards rather than filling in gaps. He added that he did not want to give the idea that a city should be stopped growing once it reached the 300,000 mark. The point he was making was simply that costs tended to rise steeply once one passed the 300,000 mark. In Salisbury's case by filling in the gaps where population density was low it might be possible to reduce rather than increase costs, and therefore put off the point of rising marginal costs.

In his summary, Mr. Rule drew a parallel with the earlier discussion about the Tribal areas. He said that the establishment of market towns which had been suggested, would give a policy of dispersal though it would be arrived at for different reasons from those outlined in Dr. McCrystal's paper—namely the aim would be to stimulate growth in the Tribal Trust Lands rather than curb growth in the cities. Dr. McCrystal had outlined a policy which would mean slowing the rate of growth in the cities in parallel with seeking to set up new towns in the Tribal areas. It was agreed that the problem of undue urban concentration was not yet an acute one in Rhodesia, but it was something to be kept in mind.



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