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THE ROLE OF GROWTH CENTRES
IN RURAL DEVELOPMENT

II. Conclusions and Recommendations

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THE ROLE OF GROWTH CENTRES IN RURAL DEVELOPMENT

II. Conclusions and Recommendations

D. R. F. Taylor and S. M. Kinani

ABSTRACT

This paper gives the major conclusions and recommendations of the study described in I.D.S. Working Paper No. 116. The basic conclusion is that a growth centre strategy should become much more central in Kenya's rural development strategy and that it opens up an exciting new possibility for rural development. These centres can form a vital link between rural and urban sectors but they must be chosen with care. Suggestions are made on criteria for choosing such centres and a case is made for incorporating and building on traditional spatial systems rather than following an artificial network imposed in colonial times.



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The research project set out to answer two basic questions.

- 1) What is the role of growth centres in rural development?
- 2) How can this role be made more effective?

The immediate context in which these questions were asked was Muranga District, Kenya but the conclusions have a much wider applicability.

The basic argument of this paper is that a growth centre strategy should become much more central in Kenya's rural development strategy and that it opens up exciting new possibilities for the implementation of change in rural areas. If appropriate centres are identified they can form a vital link between rural and urban sectors, but they must be chosen with care. It is argued that what in essence is a spatial strategy of rural development should be developed which incorporates and builds on traditional spatial patterns in the rural areas.

Rural development is not defined in the Kenya Plan but it is generally accepted to be a holistic concept which recognizes the complexity and interrelatedness of the many variables which influence the quality of life in rural areas. A definition accepted by the Working Committee on the Human Environment in Kenya reveals this: "... a series of quantitative and qualitative changes occurring among a given rural population and whose converging effects indicate in time a rise in the standard of living and favourable changes in the way of life."¹ Rural development and agricultural development are not synonymous although the agricultural production base is; of course, a vital component of any rural development programme.

"Growth centre" is a much more difficult term to define. In the Kenya context it is an integral part of the concept of Physical Development Planning as outlined in the Development Plan. Physical Development Planning is a relatively new term and is one which has a variety of definitions. Some authors use it to replace what to them is the outmoded term "town planning". Others see it as a much

1. Ominde, S.H., Ligale, A.N., Cahusac, A.B., Urbanization and Environment in Kenya, Nairobi, 1971, p. 2.

broader concept and in Kenya in essence it entails "a synthesis of development resources and of the planning proposals of all the various ministries and agencies concerned with physical development."¹ Planning revolves round the concept of growth centres of which there are four main types: Urban centres, Rural centres, Market centres and Local centres in descending order of importance and size.

Urban centres are medium sized towns in the Kenya context which have been designed to serve as the main commercial centres for an entire district. Generally, they will also contain the district administrative headquarters. The Development Plan estimates that they are likely to have a population in excess of 10,000 by the year 2000 and that some, such as Malindi, will probably have a population of over 50,000. There are 36 designated urban centres in Kenya; there is one, Muranga Town, in Muranga District.

Rural centres have been designated for development to provide at least 40,000 people in rural areas with administrative, social and commercial services. It is expected that with the progressive economic development of the rural areas they will grow into small towns of between 2000 and 5000 within twenty or thirty years. These rural centres are particularly important in that they are geared to improving both the quality and quantity of services and amenities in the rural areas. It is planned to concentrate administration and other services in these centres and to service them with public water supply, electricity and all weather roads. These rural centres are also felt to be the most suited for the development of rural cottage industries. There are 140 such designated centres in Kenya there are 8 in Muranga District.

Market centres have been designated for development of a lower level of services for a rural population of at least 15,000. The Development Plan suggests that the anticipated population of these centres will be less than 1000. It is intended over a period of time to concentrate health centres, Chief's camps and secondary schools in these centres. They will have plots designated for

1. Republic of Kenya, Development Plan 1970-74, Nairobi, 1969, p. 32.

commercial uses as well as a traditional produce market and it is planned to supply them with a public water supply and both banking and postal services. There are 231 such centres planned in Kenya; there are 7 in Muranga District.

Local centres have been designed to serve a rural population of at least 5000. Their resident population is planned as no more than 200 and although they will have no administrative function it is planned that the local centres will act as important trading and social centres especially in the sparsely populated areas of the country. There are 600 such centres planned in Kenya; there are 20 such centres in Muranga District.

Designated Growth Centres in Muranga

<u>Urban Centres</u>	Muranga		
<u>Rural Centres</u>	Maragua		
	Kandara		
	Kangema (Gakira)		
	Kigumo		
	Kiriaini		
	Kirwara		
	Saba Saba		
<u>Market Centres</u>	Githumu		
	Kamahuha		
	Kanyenyaini		
	Mugumoini		
	Ndunyu Chege		
	Ichagaki		
<u>Local Centres</u>	Kariti	Mariira	Kaharati
	Kiunyu	Gatura	Gathera
	Kinyona	Kangare	Gacharage
	Karuri	Kiria	Geitwa
	Njumbi	Gitugi	Kaweru (Gaturi)
	Muthithi	Kirere	Kabati
	Githunguri	Kahuti	

In Kenya the increase in population in the major cities, especially Nairobi, over the last decade has been dramatic, and the concept of growth centres in the rural areas, in part, represents an attempt to slow down the movement from countryside to town. The Development Plan states, "... the concentration of all economic, social and political life in the two main cities carries dangers of an economic and cultural gulf being created

between them and the rest of the economy."¹ In the rural areas government services will be concentrated in the designated growth centres. The rationale behind this is that, "In a very real sense rural development will imply rising urbanization, not in the major cities... but through growth of commercial activity in a large number of small trading centres. The plan designates rural growth centres as foci of trade, social services and communications which serve surrounding farm areas and which can significantly alter the pattern of migration and provide more even development of the nation as a whole."² All new infrastructural investment will be concentrated in these centres and "proposals involving development of service facilities within non-designated centres will therefore be discouraged."³

The term "growth centre" is not clearly defined in the Plan but in functional terms in Kenya it appears to have two purposes; firstly to provide adequate services for the rural area round it, and secondly to stimulate the economic and social development of that area.

The Growth Centre Concept and Rural Development

One of the major problems of utilizing the growth centre is that the general theory of growth centres is very poorly developed. In addition, the theoretical writings on this topic and the application of theory have all been urban based with a strong industrial component. A review of the literature reveals that a wide range of terminology exists eg. growth point, growing point, growing centre, growth pole, etc. and that these labels are used to describe a series of quite different concepts. Perroux⁴ for example, who is generally credited with initiating the whole notion of "growth pole" used this concept to apply to abstract economic space. Other

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1. Republic of Kenya. Op. cit., p. 85.
 2. Loc. cit., p. 87.
 3. Loc. cit., p. 87.
 4. Perroux, F., "Note sur la notion de 'pole de croissance'," Economic appliquees, janvier - juin 1955, pp. 307-20.

authors have applied the concept to geographical space and have added to it the geographical concept of central place and central place theory. Others have used the concept to describe geographical, social, economic and political aspects of developing urban systems. Indeed as Darwent¹ notes, unless this concept is defined more rigidly, it may prove of little use for analytical, explanatory or planning purposes. Inherent in the concept is the idea of concentrated development and Hansen has provided a useful working definition of a growth centre: "By a 'growth centre' or centres is meant a complex consisting of one or more communities or places which taken together, provide or are likely to provide, a range of cultural, social, employment, trade and service functions for itself and its associated rural hinterland."² Hermansen³ has proposed that if the concept is to be useful for planning purposes then a synthetic approach to existing theory must be adopted. What is attempted here is to take Hermansen's ideas even further and to develop a theory and application of the growth centre concept in rural areas.

The Role of the Small Place

Growth centres can be considered at various scales; there are national growth centres, an example of which in the Kenya context would be Nairobi; there are regional centres such as Kisumu and further down the scale these are local centres. For the purposes of rural development it is argued that the local scale is of critical importance and that efforts should be concentrated first at this level. The dichotomy between urban development and rural development is a false one and instead of looking at urban problems or rural problems emphasis should be placed on the interface between the rural and urban sectors.

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1. Darwent, D.F., "Growth Poles and Growth Centres in Regional Planning: A Review" Environment and Planning, 1, 1969, pp. 5-32.
 2. Hansen, N.M., Growth Centres in Regional Economic Development, New York, 1972, p. 269.
 3. Hermansen, T. "Development Poles and Development Centres in National and Regional Development - Elements of a Theoretical Framework" in A Review of the Concepts and Theories of Growth Poles and Growth Centres, U.N.R.I.S.D./70/C.6, Geneva, 1970.

In Kenya the small urban place is the interface between rural and urban sectors but it has received relatively little attention, yet such places could play a vital role in development.

A basic problem is how to define "a small urban place" in the Kenyan context and as there is no easy theoretical answer to this question a functional definition has been used. The term will be used throughout this paper to refer to a place which offers services in at least four of the following five main functional areas; administration and protection; social services, communications and transportation, commerce and industry and power. In terms of actual population such centres vary between 800 and 5000 but the size of the hinterland served is probably more critical than the actual size of the town itself and it is suggested that 30,000 to 80,000 is appropriate.¹ This figure will allow a centre of a scale which is economically viable.

The definition used here has been formed with Kenyan conditions in mind. The actual size of the hinterland served has been given as a range, as population densities vary. In Muranga, with a population of approximately 450,000, this would mean the choice of 10 - 15 small urban places. It is suggested that these be drawn mainly from the range of places currently identified as Rural centres and Market centres in the plan. Thus, instead of a four fold hierarchy of centres, what is suggested is that there be a threefold division; Urban growth centre, rural growth centre (or small urban place) and local service centre. The focal point would be the rural growth centre; the local service centres would provide only services. Thus a distinction is drawn between a service centre and a growth centre.

Van Dusseldorp² has identified three functions that such places could perform in rural development; service, economic and residential. The list of functions could be considerably expanded.

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1. The optimum size of a rural planning unit is an interesting question. The average rural commune in China for example is 50,000. In India the smallest unit is around 80,000. In Kenya the Plan suggests that rural centres serve around 40,000.
 2. Van Dusseldorp, D.B.W.M., Planning of Service Centres in Rural Areas of Developing Countries, Publication 15, International Institute for Land Reclamation and Improvement, Wageningen, Netherlands, 1971.

The use of such places would provide an opportunity of linking the developing urban system with the developing rural system. These small places are at the bottom end of the urban hierarchy; at the same time they are actively involved with the rural system. Any strategy using such small places would therefore affect both systems to various degrees and is less likely to add to the urban rural gap than strategies dealing exclusively with either system.

If the quality of rural life is to be improved then people in the rural areas must be provided with basic services such as health facilities, sanitation, water, power, education and a variety of others. It is obviously advantageous to adopt a package approach and concentrate such services in one place. The amount of capital available to provide such services is limited and concentration ensures the most efficient use of capital resources. Ominde (et. al.) suggests that concentration in selected centres ensures that "... input of capital resources into the rural areas is used with the maximum possible efficiency and to the greatest possible benefit of the regional economy and the convenience of the local people."¹ The concentration of services in one place also facilitates interaction between them. Consequently, if all government services are concentrated in one centre a farmer visiting that centre is more likely to use more than one service.

In the provision of such services the scale factor is significant. Van Dusseldorp points out that, "It is becoming more and more obvious that services catering for rural populations can only operate at their optimum when they provide for a certain minimum number of persons. This minimum number of persons (threshold) has a tendency to increase. Enlargement of scale results in the disappearance of many small service centres, or a decline in their function."² In a dynamic situation such as Kenya with population growing at an estimated 3.3 per cent per annum the problem of scale is a difficult one. The small urban centre is

1. Ominde, S.H., Ligale, A.N., Cahusac, A.B., Op. cit.

2. Van Dusseldorp, D.B.W.M., Op. cit., p. 12.

probably the smallest unit that can support an adequate package of basic services and which will not be in danger of declining or disappearing over the next twenty years. The use of such a scale of centres also increases the degree of accessibility by ensuring that the effective distance most people have to travel to reach such a centre is less than if a larger centre were used. Another consideration of scale is that Kenyans are concerned that the distributive element be part of any development. The provision of services in too large a centre would lessen the chances of benefits reaching the maximum number of people.

The residential function of small urban places is not at present very significant in Kenya where most people in the rural areas live on their own land. However it is liable to become more important in the future. "Stated simply, there will just not be sufficient land for all or even most, of the grandsons of today's farmers to become farmers themselves. Some of them may be able to obtain land in resettlement schemes but preliminary studies of soil potential throughout Kenya reveal that the amount of land with surplus population absorption capacity is less than might be imagined, due to the low rainfall, unsuitable soil conditions and other factors, and a large proportion of Kenya's future generations will need to find non-agricultural employment." In many of Kenya's rural areas population densities are already high and if current population trends continue the rural population will double within the next thirty years. Even if the major cities continue to absorb a disproportionate percentage of this increase there will still be population pressure in the rural areas and the number of landless people will increase. The small urban place will have to provide residential accommodation for many of these people.

Selecting centres and devising a strategy in Kenya so that the small urban centre may provide residential and service functions is relatively straightforward. The role of such centres in the introduction and diffusion of innovation and the stimulation of

1. Ominde, S.H., Ligale, A.N., Cahusac, A.B., Op. cit., p. 142.

socio-economic growth is much more problematic, yet these are key elements in a growth centre strategy.

Innovation is generally held to be a key factor in development; "since the diffusion of innovations is a key process of development much attention has to be devoted to the formulation of propagation strategies."¹ Berry² describes the effect of a given innovation as a declining function of time which is also subject to a threshold limitation, a minimum size of region beyond which diffusion will not proceed. Consequently the lowest levels of welfare are in areas peripheral to small urban centres in the outlying hinterland regions.

There is ample evidence to support the hypothesis that innovation and modernization move from the major urban centres along the transportation routes to smaller urban centres and lastly out into the rural areas and Berry³ has also argued that a well developed urban hierarchy is essential to this process. This process also suffers from time and distance decay effects. Logan⁴ however has drawn attention to the fact that a distinction should be made between the acquisition of the material possessions of economic development and the generation of increased productivity. In Kenya a major aim is the incorporation of rural inhabitants in the development process. If innovation filters down through a hierarchy with both time and distance decay effects then it would seem logical to reduce these effects by introducing innovations at the lowest level of urban centre rather than allowing it to filter down. This of course applies to induced innovation especially in the field of rural development and would suggest that the use of the small urban place as an injection point for innovation is

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1. Hermansen, T., Op. cit. p. 81.
 2. Berry, B.J.L., "Hierarchical Diffusion; the Basis of Development Filtering and Spread in a System of Growth Centres" Man, Space and Environment, English, P.W., Mayfield, R.C. (eds) London, 1972. p. 359.
 3. Berry, B.J.L., Loc. cit.
 4. Logan, M.T., "The Spatial System and Planning Strategies in Developing Countries" The Geographical Review, 62,2, 1972, pp.229-244.

appropriate. It is also generally agreed that the urban hierarchy is poorly developed in Kenya anyway and consequently innovation injection utilizing this hierarchy is not particularly effective.

The small place would be an injection point for whatever rural development strategy was considered appropriate. The use of such a method leaves the choice of the type of injection open. In the Kenya context the strategy worked out as a result of the Special Rural Development Program could be implemented through these centres.

The economic function of such small centres involves trade, marketing, commerce and small scale local industry. These functions are already significant and are growing. In Central Province it was after the increases in wealth which followed agricultural development in the late 1950's and the early 1960's that such small centres began to emerge and grow.¹ These essentially small scale enterprises grew spontaneously and with very little encouragement initially. Official encouragement and help to the informal sector is a relatively recent phenomenon and as the I.L.O. Report² points out, greater efforts could be made in this area. Given encouragement, capital and planning for small scale enterprise, the small urban place could become an important economic focal point. A recent study gives an outline of some of the possibilities in this area.³

The advantages of concentrating services in such centres has already been discussed. There are additional advantages in that organizational changes can be made. Nellis⁴ has argued that the major problem of rural development in Kenya is the lack of

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1. Taylor, D.R.F., "New Central Places in East Africa" African Urban Notes, 3, 4, 1968, pp. 15-29.
 2. International Labour Office, Employment Increases and Equality; a Strategy for increasing productive employment in Kenya, 1972.
 3. Child, Frank C., Kempe, Mary E. (eds.) Small Scale Enterprise, Occasional Paper No. 6, Institute for Development Studies, University of Nairobi, 1973.
 4. Nellis, J.R., "The Administration of Rural Development in Kenya: Plan Formulation and Implementation in the Special Rural Development Programme," Issues in African Development, Canadian Association of African Studies, Ottawa, pp. 168-182.

effective coordination both at the centre and in the field at the local level. In Kenya sectoral planning has led to a multiplicity of government agencies with fairly strongly developed vertical linkages but very poorly developed horizontal linkages. Logan argues that, "The effectiveness of organizational structures is probably the most critical variable in the whole development process."¹ He further comments that, "Organization implies the transmittal of developmental impulses and of incentives to which farmers can respond by increasing their productivity; it is the major element in promoting the structural transformation that is the aim of planning policies in developing countries."²

Poorly developed horizontal linkages have weakened the effectiveness of transformation in the rural areas as the efforts of various agencies have suffered from lack of coordination. Plans already exist for the establishment of District Development Centres in some of the small urban centres and this structure could coordinate all rural development in the area. With all agencies channeling and coordinating their plans the cumulative effect of these plans will be much improved. This will also allow consideration to be given to the overall impact of different planning elements. Too often in the past innovations have been made in the rural areas which are in themselves advantageous when viewed in isolation, but which have counterproductive effects on other elements of rural life. The small urban place would be an effective coordinating point.

If planning is centred in these small urban places then the chances of local involvement and participation are likely to be increased. Development must come from the grass roots and have popular local support if it is to be effective. Kenya has a highly centralized planning system and has yet to create institutions which will encourage local participation on the scale which

1. Logan, I.M., Op. cit., p. 229.

2. Logan, I.M., Op. cit. P. 231.

exists in Tanzania at the village level. The lowest level planning body in Kenya at present is the District Development Committee and Districts are fairly large units. Despite substantial "self-help" activity in some areas, local involvement in planning is not as effective as it could be. A planning strategy based on the small urban places is likely to increase the possibility of more effective local involvement.

So far the assumption has been made that such centres will give rise to beneficial spread effects in their hinterlands. This assumption can only be tested once the strategy has been applied. At a larger urban scale Hirschman¹ has argued strongly for spread and trickle down effects. He emphasizes that the trickling down effect is strongly influenced by the existence of complementarities between the centre and its hinterland. Myrdal² on the other hand has argued that the back wash effects can outweigh the spread effects. Spread effects are, he argues, caused by the movement of labour, capital and goods but backwash effects are caused by exactly the same elements.

There is considerable evidence to show that the structural relationship between the urban systems and the rural sector in many developing countries are very weakly developed. Logan³ Postulates that this is due to the fact that the spatial systems were those built up by the colonial governments which were not always conducive to the development of the country as they tended to be geared to "extraction" from the rural areas. Lacoste goes even further, "Most towns in the underdeveloped countries are what Mr. Juillard calls 'insular' towns. Some authors have compared them to veritable cysts. These towns have scarcely any beneficial effect on the countryside around them..."

These arguments must also be considered at the local scale. The key lies in the selection the growth centres. They must be places

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1. Hirschman, Albert O., The Strategy of Economic Development New Haven, 1958.
 2. Myrdal, Gunnar, Economic Theory and Underdevelopment London, 1957.
 3. Logan, M.I., Op. cit.
 4. Lacoste, Yves, "The Problems of Urban Networks in the Underdeveloped Countries," Bulletin Trimestriel, 70171, Secretariat des Missions d'Urbanisme et d'habitat, Paris, October, 1972, p. 6.

which have the "complementarities" with their hinterlands to which Hirschman refers. In this case, however, these complementarities will be agricultural rather than industrial, at least in the initial growth stages. The centres chosen should also be geared to the generative growth function rather than to the extractive and law enforcement functions so typical of colonial times.

The Selection of Growth Centres

If centres are to be chosen primarily as growth centres rather than service centres, and are to serve the functions outlined above, what methodology should be used to select them, given the fact that hundreds of small villages already exist?

The selection of growth centres in Kenya, which is currently undergoing revision, leans very heavily on the well known concept of central place theory. Basing their ideas on the assumption that man tries to organize his activities over geographical space in an efficient manner, Christaller¹ and Losch² were able to deductively derive a structure of spatial organization that purports to explain the pattern of clusters of human activities as characterized by relative locational positions, sizes, functions and spatial distribution of urban places. They were able to theoretically establish a hierarchial system of places in which a number of levels, corresponding to the number of goods - services spatially arranged in a hexagonal lattice of serviced areas, could be identified depending on the threshold size and range of a good or service. Bunge has referred to central place theory as, "... geography's finest intellectual product,"³ but as Hermansen⁴ has pointed out, one of the basic weaknesses of the theory is that it does not explain growth phenomena. It is a static theory.

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1. Christaller, W., Central Places in Southern Germany, Englewood Cliffs, 1965 (Translated from original German version, Jena, 1933).
 2. Losch, A., The Economics of Location, New Haven, 1954. (first German edition, 1940).
 3. Bunge, W., Theoretical Geography, Gleerup, Lund, 1966, p. 133.
 4. Hermansen, T., Op. cit.

that aims at explaining the existence of certain patterns of centres, but tells us nothing about how the pattern came into being nor how the pattern may undergo future changes. Hermansen also stresses that one must remember that "... the spatial structure of a region does not come into being at once, but is a result of a process of time, in which certain things come first and depending upon their configuration, determine the other things."¹ It would seem that the selected network of service centres in Kenya, (ranging from local village to Nairobi itself) which is patterned dominantly, but not exclusively, on central place theory, may be adequate for providing the most efficient spatial pattern of services but is less adequate for stimulating economic and social development in the rural areas in a dynamic sense.

To achieve a more effective pattern central place theory must be supplemented by the theory of localized development poles and the theory of spatial innovation of diffusion to give a synthesis of spatial theory which can be effectively implemented in a practical sense. The role of the growth centre as outlined earlier in this paper is an attempt at such a synthesis.

The first practical step is to understand the existing spatial system so that the elements in it conducive to the growth centre idea can be utilized. This is especially important in Kenya where the existing spatial patterns have been influenced by a variety of factors not all of which have been advantageous to the socio-economic development of the rural areas.

The first central places in Kenya were probably the periodic markets. These had no permanent buildings but certainly offered centrality functions as Taylor² has demonstrated. There was often a well developed marketing system with a hierarchy of markets existing.³ When the colonial government took charge another system of central places was created for administrative purposes. These were the District, Divisional and Locational headquarters

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1. Hermansen, T., "Development Poles and Related Theories: A Synoptic Review" in Hansen, N.M. Growth Centres in Regional Economic Development, New York, 1972, p. 179.
 2. Taylor, D.R.F., *Op. cit.*
 3. Taylor, D.R.F., "The Internal Trade of Fort Hall District Kenya" Canadian Journal of African Studies, Vol. 1, No. 2, 1967, pp. 111-122.

which were created from the standpoint of administrative convenience or even the personal preference of the earliest administrators. In some instances existing nucleation points such as the periodic markets were deliberately avoided. These colonial centres tended to add service functions as government bodies grew in complexity. A few shops often emerged to serve the needs of the civil servants rather than those of the people of the area. The earlier spatial system of the traditional markets continued to exist and in some instances grew rather than declined. It is perhaps not surprising that colonial government marketing systems for local agricultural produce based in their administrative centres were not very successful because they were often in direct competition with a well developed system. The mission stations of the various religious groups were established almost at the same time, and again these often avoided not only the traditional nucleations but also the colonial centres. In some areas Trading Centres were gazetted outside of administrative centres. These were dominated by Asian traders and tended to be "extractive" in character. Again traditional nucleations were avoided.

What in effect emerged in many of Kenya's rural areas was not one spatial system but several systems, each serving a different function. There was little integration between them even in cases where all would occupy almost the same site as sometimes occurred. In such instances the town or village would invariably have two or three parts: an administrative boma, a trade centre or market place and a mission station and each would be physically as well as functionally separate from the other. There is however a new spatial system beginning to emerge in some areas in Kenya.

In Central Province during the 1960's, increasing agricultural progress and wealth brought with it a demand for goods and services which did not exist before. The result was the fairly rapid growth of what had been small villages into much larger centres. The first manifestation of this was an increase in the number of dukas or general stores. This was accompanied by a move towards specialization with general stores giving way to butcher shops,

bakeries, tailoring shops, etc. These emerged at sites which were convenient to the people and perhaps not surprisingly they coincided with the site of the traditional market,¹ with the shops growing up around the market perimeter.

In choosing growth centre locations this pattern of development should be utilized. In the methodology currently used in Kenya all of the services developed in a centre are treated as if they were functionally integrated without due consideration of the time element which is probably vital to the understanding of the centre being assessed.

A place which does not show elements of the new spatial pattern, as evidenced by the markets and dukas, is unlikely to succeed as a growth centre. Utilization of these indices of established linkages with the hinterland will ensure the selection of centres with the existing "complementarities" so important to ensuring spread and trickle down effects. If the administrative and law enforcement element is over-emphasized in the selection of centres there is a great danger that the centres chosen will perpetuate the exploitive element which Myrdal and others fear. In Kenya this may mean that additional capital investment should not be made in some of the administrative centres. In some cases administrative services might well be relocated. Our study of Muranga shows that in this area major relocation will not be required. The major practical problem is, of course, the level of capital investment already made. Fortunately, outside of the major centres, the capital invested is not large and some of the buildings could indubitably be used for other purposes. The costs involved in choosing the wrong centre would be infinitely greater than those involved in abandoning some existing buildings.

1. Taylor, D.R.F., Op. cit.

The use of local markets and shops is also a suitable indicator of economic growth potential. In the rural areas the commercial function is a good indicator of economic performance. The results of our research in Muranga show that in any one day out of total district population of approximately 450,000, 26,117 people use the traditional markets and 96,112 people use the shops. The shops and businesses employ 6275 people. They are therefore very significant to a sizeable proportion of the people of the District. In financial terms the daily turnover in the markets amounted to 306,124/- and in the shops to 292,889/-. This latter figure especially is an underestimate and is probably considerably higher. At an absolute minimum this sector therefore accounts for 600,000/- a day. This would tend to support the I.L.O. view of the informal sector; "... the bulk of employment in the informal sector, far from being marginally productive, is economically efficient and profit-making, though small in scale and limited by simple technologies, little capital and lack of links with the other ("formal") sector. Within the latter part of the informal sector are employed a variety of carpenters, masons, tailors and other tradesmen, as well as cooks and taxi drivers, offering virtually the full range of basic skills needed to provide goods and services for a large though often poor section of the population."¹

The relative importance of the informal sector can be measured from the total number of shops and businesses in a centre together with the time periods in which they were established. Also significant is the degree of specialization, increased variety of goods, business turnover, size of stock and general business atmosphere.

In the current research considerable time, money and effort was spent on estimating the relative importance of this sector centre by centre in Muranga. Detailed studies on this scale in other areas would be useful but difficult to replicate in terms of time, personnel and money. A "quick and dirty" method for

planning purposes would be the identification of the major markets of an area which could be done quickly with the aid of local people together with an analysis of the trade and business licences issued by the various County Councils. These would give a good indication of the relative growth of different centres.

The I.L.O. "...perceive the informal sector as a sector of thriving economic activity and a source of Kenya's future wealth."¹ It would seem logical therefore to make the identification of this sector an important element in the selection of growth centres.

Virtually every major source is agreed on the great importance of the diffusion of innovation in rural development. Diffusion theorists emphasize that information flows are always indispensable prerequisites for flows of capital, labour and commodities. What methods can be used to pick out centres which are the most effective for innovation diffusion? First the elements of the theory of the spatial diffusion of innovation must be examined. Writings on this topic are varied and quite extensive with major contributions being made by Hagerstrand,² Rogers,³ Berry,⁴ Brown⁵ and a variety of others. Hagerstrand developed an essentially social theory of diffusion which Hermansen has summarized well. In brief "... diffusion of innovations comprises two processes: the dissemination of information about the innovation and the adoption of the innovation. The first process is largely a function of social communication. The second is a complex process of learning, accepting and decision making. The spread of information takes place through a number of channels that can be

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1. International Labour Office, Loc. cit.
 2. Hagerstrand, T., Innovation Diffusion as a Spatial Process, Chicago, 1968.
 3. Rogers, E.M., Modernization Among Peasants: the Impact of Communication, New York, 1968.
 4. Berry, B.J.L., Op. cit.
 5. Brown, L., Diffusion Dynamics: A review and revision of the quantitative theory of spatial diffusion of innovations, Lund, 1968.

classified into two main groups - mass media and interpersonal - of which the latter is contended to be the more important. The pattern of social (interpersonal) communication can be conceived as a network consisting of nodes (sources and receivers) and links (channels). The sources and receivers of information are social actors with definite locations who establish contact with each other for various reasons."¹

Our research in Muranga has revealed that the most important point for diffusion of innovation are the traditional markets, the bars and the tea shops. This is not surprising and the use of such a diffusion network for rural development innovation has much to commend it. Firstly, it would fit in with one of the basic concepts of diffusion theory namely that "... induced innovations should be initially concentrated utilizing the existing system of communication linkages. Instead of working against or trying to enforce other patterns of diffusion, efforts should be made to identify the prevailing system in order to exploit its facilities for dissemination and persuasion."² Secondly, such a network is an interpersonal one between individuals of equal status and as Lasuen points out; "The farmer will listen more attentively, and will be more inclined to act upon, a new piece of farming information from another farmer than from most other news sources, media and agents."³

The traditional markets have the additional advantages that they reach those most directly concerned with cultivation - the women. Of the estimated 26,117 people using the traditional markets in any one day 80 per cent are women. The bars on the other hand are dominated by men, and the tea shops are patronized by both. The importance of these linkages is illustrated by the

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1. Hermansen, T., Op. cit. pp. 188-189.
 2. Hermansen, T., "Development Poles and Development Centres in National and Regional Development - Elements of a Theoretical Framework" in A Review of the Concepts and Theories of Growth Centres, U.N.R.I.S.D./70/C.6, Geneva, 1970, pp. 81-82.
 3. Lasuen, J.R., "On Growth Poles" in Hansen, N.M., Op. cit., p. 30.

response given to the question asked of those using the traditional markets as to which other services they used on market day. Eighty-nine per cent of the sample of over 25,000 people used other services. Of these 58.3 per cent used the shops, 38.5 per cent used the bar or tea shop and the next highest percentage was 0.3 per cent who went to see the chief. With the exception of the "other" category all the services ranked either equal to or below this.

The social significance of the traditional markets is high. Each person entering a market was asked the primary reason they came to market. Out of a total sample of over 25,000, 21.1 per cent gave social reasons as the main reason they came to market. This compared with 41 per cent who came mainly to sell, and 38 per cent to buy. People were also asked the secondary reason they came to market and in this instance social reasons were at the head of the list with 45.2 per cent followed by buying 43.7 per cent and selling 11.5 per cent.

Not all markets were equally significant as social centres and the percentages who came to market primarily for social reason ranged from as low as under 5 per cent to as high as 76 per cent.

It is suggested that centres for the injection of innovation could be chosen by using three indicators; the social attraction of the traditional market, the number of bars and the number of tea shops. In future studies the relative social importance of each market can be determined simply by asking the primary and secondary reason people come to market. Those markets with higher percentages of people coming for social reasons will be more significant in terms of points for the diffusion of innovation. In Muranga District there are 2008 specialized shops and businesses and of these 22.76 per cent are bars and 12.80 per cent are tea shops. Again there are significant variations from these averages and the argument is again that those places with higher than average percentages are more significant for innovation diffusion. For planning purposes indication of this could be derived from the County Council licences if time and money were not available for survey.

Another important indicator for the selection of a growth centre is the people's perception of the centre and their participation and involvement in its affairs. It has already been suggested that the existing planning machinery at the district level does not provide for the most meaningful participation and involvement of the local people at village level who would certainly be directly and immediately affected by whatever proposal is eventually implemented. It is argued that the success or failure of whatever service apparatus is contemplated will to a large extent depend upon people's acceptance or rejection.¹ In our research we attempted to measure this by asking wananchi how they perceived the future growth of the centre they identify with. By asking the kind of new functions they would like to see established, their membership in various forms of local organizations, one could gauge their sense of "belonging to" and their concern for the welfare of their own community which is an important aspect of the development process. The research also helped gauge the overall perception of the people on what services they considered most important to their welfare. The response of over 6000 individuals to what they would like to see improved first in their village was as follows:

Communications, Power and Water	34.5 per cent
Health	23.4 per cent
Education	15.6 per cent
Administration and Law Enforcement	11.4 per cent
Industry and Commerce	8.0 per cent
Agriculture and Veterinary Services	7.2 per cent

There were significant variations from these averages in different parts of the District and by different occupation groups.

One useful measure of local involvement is the level of self help activity. The greater the degree of self help activity in a centre the more likely that centre is to grow. Self help records

1. Van Dusseldorp, B.W.M., Op. cit.

are available from secondary sources on a locational basis and could be used as an indicator of comparative local involvement when selecting growth centres. Yet another measure is the volume of loans taken out. Records are available on loans issued and when used comparatively would be a useful indicator of potential growth areas.

The importance of local involvement has been well put by Klaasen, "... local initiatives could be envisaged as being of such importance that, whatever the growth poles chosen by the central government, room should always be left within the framework of the growth pole theory for the incorporation of such initiatives in the general policy."¹

Several authors have stressed the importance of entrepreneurs in the development process. They are considered a key element in the growth pole concept by both Perroux² and Hirschman³. Friedmann, who sees development as innovation, argues that; "Innovations require individuals or institutions that will organize the necessary resources and assume the risks of failure; every innovation requires an innovative agent."⁴

Our research in Muranga suggests that the traders, businessmen, shopkeepers, lorry owners, bus owners, and taxi owners are the entrepreneurs of rural society. To these one might add the progressive farmer but often the individuals mentioned earlier also own and run the better farms. The concentration of such people can be measured by recording the numbers present in each centre. Those with the highest concentration are more likely to be appropriate growth centres. Again the best way to obtain this information is by survey research but trade licences and vehicle registrations, available from secondary sources, could be used

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1. Klassen, L.H. "Growth Poles in Economic Theory and Policy" in A review of the Concepts and Theories of Growth Poles and Growth Centres, U.N.R.I.S.D./70/C.6, November 1970, p. 141.
 2. Perroux, F. Op. cit.
 3. Hirschman, A.O., Op. cit.
 4. Friedmann, J., "A General Theory of Polarized Development" in Hansen, N.M., Op. cit., p. 88.

for planning purposes if field research was impractical.

Mobility and interlinkages with other centres are also an important indicator of growth potential. Those centres which show a high degree of mobility in their population are more likely to be effective growth centres than those which do not. In practical terms this can be measured in a number of ways. The fastest is to do a point study and record the number of public transport vehicles ("matatus") stopping in each centre. Those centres with the highest totals are important nodal points. Weisner¹ argues that a rural-urban network exists in Kenya which is of considerable developmental significance. The greater the number of "matatus" stopping in a centre the greater the significance of this linkage is likely to be. Other measures used during our research included sources of stock for businesses and linkages with other barter markets. The service hinterland areas of each centre were established.

The influence of transport is of critical importance to rural development and the building of a new tarmac road can transform a rural area. Some authorities have argued that traditional spatial systems should be transformed by the introduction of new road networks more conducive to modernization. Our work in Muranga has suggested that the effect of improved transport is greatest when it reinforces other existing spatial systems. When a new road is built, as has happened in Muranga District, it is theoretically possible for any or all of the centres through which it passes to grow. In Muranga, however, no new centres have emerged and the improved transportation net has simply intensified existing trends. This may well be a result of the fact that the new roads follow the same ridge top alignment as the old.

Conclusions

Kenya's rural development strategy as initially formulated at the Kericho Conference in 1966 and continued by the Special Rural

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1. Weisner, T.M., "The Rural-Urban Network in Kenya," Unpublished paper printed at the Colloquium on Political Implications of Local Change in Africa, University of Toronto, 1971.

Development Programme has virtually ignored spatial aspects of planning. The growth centre concept exists in the Kenya Development Plan but has not been seriously considered by most rural development planners as is evidenced by the lack of effective incorporation of this concept in the S.R.D.P. It is argued that at the very least there should be a merger of physical and economic planning in the rural areas and a case has been made for making the growth centre concept a central part of rural development strategy.

The need to concentrate on small urban places in the rural areas has been stressed and the role of such places in rural development outlined. Methods of selecting appropriate centres from the many existing ones have been described and tested. The arguments apply basically to the densely populated agricultural areas of Kenya where the pilot project was run and further work will have to be done to test the application of the concept to pastoral areas.

The I.L.O. Report states that: "Our analysis lays great stress on the pervasive importance of the link between formal and informal activities."¹ The strategy outlined in this paper is felt to be a step in the direction of developing a closer linkage between urban and rural Kenya.

In specific terms it is suggested that the current four fold hierarchy of growth centres as outlined in the Development Plan be replaced by a three fold division of urban growth centre, rural growth centre and local service centre with greatest attention being given to the rural growth centres. There should be one rural growth centre for every 35,000 to 80,000 people depending upon population densities. In Muranga this would mean the selecting of 10 to 15 centres.

1. International Labour Office, Op. cit., p. 5.