URBAN PRIMACY IN KENYA

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Introduction

The concept of urban primacy is used to describe an urban system dominated by one or two large cities with a stratum of small sized centres and a conspicious absence of medium sized towns. Used in this sense many urban systems in the Third World are primate.[1] However, despite the problems such as shortage of employment and infrastructure facilities associated with urban primacy and the widespread usage of this concept in studies related to development planning, no satisfactory explanation of growth processes leading to urban primacy in the Third World has been forthcoming. Most studies that have been carried out in this field focus either on testing propositions about relationships between indicators of economic development and primacy at an international level or examining historical evolution of city-size distributions at a national level.[2]

The objective of this study is to put forth an exploratory growth model of urban primacy. Based on a historical Kenyan case study, the series of interrelated and recursive growth processes that lead to polarization in primate cities of urban based economic activities in colonial spatial systems are described.

The Conceptual Context

The conceptual context for this study lies in a diverse body of literature pertaining to urban polarization and growth of large cities. A review of this literature demonstrates that there are two related sets of factors that are of key importance in explaining the phenomenon of urban primacy. These factors are (i) first, the role of cities as communication nodes and loci of information exchange and accumulation and (ii) second, the circular and cumulative growth characteristic of large cities. These two factors are examined in the following paragraphs.

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1. S. El-Shaks, "Development, Primacy and Systems of Cities," Journal of Developing Areas, Vol. 7 (1972), pp. 11-36.

2. For a review of these studies, see J.A.S. Ternent, "Urban Concentration and Dispersal: Urban Policies in Latin America" in A. Gilbert (ed.), Development Planning and Spatial Structure (London: John Wiley and Sons, 1976) pp. 169-196.

(i) Classical economic theory, such as the theory of perfect market, assumes perfect knowledge on the part of economic decision-makers without any uncertainty or risk involved. This is, however, rarely the case in real life where decisions are made in an environment about which decision-makers have imperfect information.[3] The state of information thus plays a key role in decision-making. The aim of acquiring information is to minimize the extent of uncertainty stemming from ignorance, risk and indeterminancy.[4]

As noted by Pred, spatial biases in information availability as well as cost have considerable repercussions on the locational behaviour of decision-makers.[5] A distinction is made here between "private" and "public" information..

In general, the quantity and quality of relevant private information, that is information received by person-to-person contacts, including direct face-to-fact encounters, telephone calls and written exchanges, in possession of location decision-makers are affected by his geographic, or site and situation, characteristics since inter-personal exchanges of information are inclined to be most intense at very short distances. Because of daily time-budget constraints, the density of contacts included in a single person's private information field must decrease very rapidly with increasing distance. Thus, highly gregarious actors in large cities will apt to have well articulated information fields related to a particular problem, especially so since information fields are quite often occupationally bound.[6]

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3. K.E. Boulding, "The Economics of Knowledge and the Knowledge of Economics" American Economic Review, Vol. 56 (1966) pp. 1-13; G.J. Stigles, "The Economics of Information" The Journal of Political Economy, Vol. 69 (1961), pp. 213-225, W. Isard and A. Reiner, "Aspects of Decision-Making Theory and Regional Science", Papers and Proceedings of the Regional Science Association, Vol. 9 (1962), pp. 25-34.

4. M. Shubik, "Information, Risk, Ignorance and Indeterminacy" Quarterly Journal of Economics, Vol. 68 (1954) pp. 628-640.

5. A Pred, Behaviour and Location. Foundations for a Geographic and Dynamic Location Theory, Part I, Lund Studies in Geography Series B, Human Geography, No. 27 (Lund: C.W.K. Gleerup, (1967) p. 9.

6. T. Hagerstrand, "Aspects of the 'Spatial' Structure of Social Communication and the Diffusion of Information" Papers of the Regional Science Association, Vol. 16 (1966), pp. 37-42.

The few studies so far on the need of contacts for the exchange of private information and the role of this factor in influencing location behaviour have emphasized the role of direct face-to-face contacts among all other forms of contacts between individuals for communicating private information.[7] Indirect contacts are best suited to the transmission of simple, well-structured, routine information. The more complicated or non-routine the information becomes (such as, information relating to economic and political vicissitudes), the greater the advantage of direct personal contacts. Hence, direct personal contacts are preferable in situations such as: when several people have to exchange information with one another at the same time, when the exchange of information contains an element of uncertainty, or when contacts are in the form of negotiations and discussions.[8]

The other type of information is public information i.e. that received from printed or electronic media and/or government sources. The quantity and quality of public information in possession of individual locational decision-makers are influenced by their geographic situations to the extent that spatial biases exist in the circulation of such information.[9]

Normally, public information originates in the largest cities which also have the best contacts with the outside world. Subsequent diffusion of it follows the urban hierarchy of a country or region.[10] Thus decision-makers are favoured or disfavoured in their accessibility to public information

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7. G. Tornquist, Flows of Information and the Location of Economic Activities, Lund Studies in Geography, op.cit. No. 30 (Lund: C.W.K. Gleerup, 1968); _____, Contact Systems and Regional Development, Lund Studies in Geography, op.cit. No. 35 (Lund: C.W.K. Gleerup, 1970), A.P. Pred and G. Tornquist, Systems of Cities and Information Flows, Lund Studies in Geography, op.cit.,No. 38 (Lund: C.W.K. Gleerup 1973).

8. Tornquist (1970), op.cit., pp. 26-30.

9. Pred (1967) op.cit., p. 44.

10. Hagerstrand (1966) op.cit., p.4.

by the hierarchical position of the city of their residence.[11] The higher the order of the centre the greater the variety and depth of public information sources on which its residents can draw. But there is also growing evidence that the non-hierarchical economic interdependencies between cities influence the diffusion of information.[12]

Thus, uncertainty regarding location of an economic activity will tend to be less in large cities than in small ones, since the availability of private and public information has a strong large-city bias.[13] Hence, as has been argued, cities originate individually as communication nodes or loci of information exchange and accumulation. Their subsequent growth is highly correlated with the "intensification of communicatiom, knowledge and controls."[14] It has been predicted that improvement in communications in the future will act as a further centralising influence, and it is very likelythat "the economic life of the world will (become) concentrated into a few major information centres".[15] In the underdeveloped countries, increasing concentration of economic activities in primate cities has been shown to be inevitable mainly because of the superior information availability in these cities. Availability of such information in these countries becomes vital, particularly in view of the rapidity and frequency of changing economic and political circumstances and "since the sources and modes of this information are unperiodic, unpredictable, and require cultivation of sources, evaluation of intangibles, and delicate negotiations which

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11. Pred (1967) op.cit., p. 44.

12. A Pred, Urban Growth and the Circulation of Information The U.S. System of Cities, 1790-1840, (Cambridge, Mass: Harvard University Press, 1973), pp. 227-231.

13. Ibid, pp. 42-46.

14. R.L. Meier, A Communication Theory of Urban Growth (Cambridge, Mass: MIT Press, 1962), p. 43.

15. P. Hall, The World Cities (New York: McGraw Hill, 1966) p. 240.

can only be conducted through personal face-to-face contacts..."[16] Neglect of information as a locational factor is, in this respect, a telling inadequacy of classical location theories such as the central place theory.

(ii) A number of studies dealing with spatial aspects of growth processes have been prompted by the inadequacy of equalization theories to explain variations in economic growth.[17] The new approaches emphasize the cumulative and self-reinforcing advantages of the initially established locations in the process of development with stress on the role of agglomeration and other external economies.

Probably the most important of these approaches is a model of the process of regional development that has been formulated by Myrdal. This model shows that in an economy, particular changes do not -- as equilibrium models portray -- "call forth countervailing changes but, instead, supporting changes which move the system in the same direction as the first changes but much further."[18] Hence, cumulative concentration of economic activities in already established cities or regions which by virtue of some advantage have moved ahead of others, will lead to increasing inequality.

Even in the developed spatial system, large cities seem to enjoy locational advantages which seem to outweigh any need for decentralization. The point where the marginal costs exceed marginal productivity of increased urban size appears not to have been reached even in the largest metropolitan centres of today.[19] Ullman has, for instance, provided evidence for cumulative concentration of economic activities through the "self-generating momentum" expressed by growing metropolitan

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16. W. Alonso, "Urban and Regional Imbalances in Economic Development". Economic Development and Cultural Change Vol. 17 (1968), pp. 1-14.

17. Some of these studies are G.M. Myrdal, Rich Lands and Poor (New York:Harper Bros. 1957); _____, Economic Theory and Underdeveloped Regions (London:Methuen, 1957), A.O. Hirschman, The Strategy of Economic Development (New Haven, Connecticut Yale University Press, 1966). J.R.P. Friedmann, "A Generalised Theory of Polarised Development" in Growth Centres in Regional Economic Development ed. N. Hansen (N.Y.: Free Press, 1972): E.L.Ullman, "Regional Development and the Geography of Concentration", Papers and Proceedings of the Regional Science Association, Vol. 4 (1958), pp. 179-198, H.W. Richardson, Regional Growth Theory (New York, J. Wiley & Sons, 1973).

18. Myrdal, op.cit., p. 13.

19. W. Alonso, Equity and Its Relation to Efficiency in Urbanization, Centre for Planning and Development Research University of California, Berkeley, Paper No. 78.

regions in the United States. This momentum is acquired through, and is a reflection of, development in these nodes of "notable external economies of scale and the largest market in the country".[20] This view has been recently incorporated by Richardson in his regional growth theory. In his analysis of regional growth process he places key emphasis on agglomeration economies nd locational preferences as opposed to the traditional neo-classical variables of wage and capital yield differentials.[21] Agglomeration economies in urban areas, which lead to a self-reinforcing tendency towards concentration consist of internal and external economies, the latter comprising localization economies and urbanization economies or economies of urban concentration.

In a similar manner, the export base theory, stresses the key role of an export base in the growth of regions and of cities.[22] As has been pointed out with respect to Latin America, development of most cities in that continent was induced by an export base, that is, by an external demand for the resources of hinterlands (enclaves) of these cities. Few Latin American cities have developed on the basis of predominantly intra-regional demand as had overridingly been the case in the Old World.[23] Rose has developed a model, based largely on the Australian experience, supporting such a hypothesis.[24]

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20. Ullman, op.cit., p. 180.

21. Richardson, op.cit., pp. 133-150.

22. D.C. North, "Location Theory and Regional Economic Growth" Journal of Political Economy, Vol. 63 (1955) pp. 243-248.

23. W.B. Stohe, "Some Hypothesis on the Role of Secondary Grwoth Centres as Agents for the Spatial Transmission of Development in Newly Developing Countries.... The Case of Latin America". Paper prepared for the IGU Commission on Regional Aspects of Economic Development, London, Ont., August 1972, p. 5 (mimeographed).

24. A. J. Rose, "Dissent fFrom Down Under: Metropolitan Primacy as the Norman sState", Pacific Viewpoint, Vol. 7 (1966), pp. 1-27.

Two studies that explicitly take into account the impact of information circulation and the circular and cumulative growth process on the urban development process are outstanding.[25] Pred's model is based on a locational interpretation of mercantile and related industrial activities within the early American urban system while Code's model is based on a similar interpretation of the financial intermediary function in Canada.

Pred's circular and cumulative process of the urban size growth model for the early American mercantile city stresses the impact of transportation development and agglomeration economies for the individual city. In a more recent study, Pred has advocated a similar model, of which the above is considered submodel, to depict the process by which large-city rank-stability set in for the United States system of cities between 1790 and 1840.[26] Substantial support for this view of self-generating interaction between the largest cities in an urban system is provided also in the recent literature on transportation development.[27] Code's model depicting the growth process of financial communities, based on the Canadian experience, is also couched within a circular and cumulative context.

Urban Primacy in Kenya

The proportion of Kenya's population that is classified as urban (that is, living in centres of above 2,000) is small even when compared to other African countries such as Zambia. Urbanization in Kenya, nevertheless, has become a significant development constraint or account of the rapid rate of growth of the country's urban population

25. These two studies are: A.R. Pred, The Spatial Dynamics of U.S. Urban-Industrial Growth, 1800-1914, Cambridge, Mass. MIT, 1966) and W.R. Code, The Spatial Dynamics of Financial Intermediaries: An Interpretation of the Distribution of Financial Decision-Making in Canada, Ph.D. thesis, University of California, Berkeley, 1971. The study by J.E. Vance, The Merchants World: The Geography of Wholesaling (Englewood Cliffs, N.J.: Prentice Hall, 1970) also falls into this category.

26. Pred (1973) op.cit., pp. 202-238.

27. E.J. Taaffe et.al. "Transportation Expansion in Under-developed Countries: A Comparative Analysis". Geog. Review, Vol. 53 (1963) pp. 503-29; D.G. Janelle, "Spatial Reorganization: A Model and Concept", AAAG, Vol. 59 (1969), pp. 348-64.

and related to this, the concentration of population and economic activities in the two major urban centres Nairobi and Mombasa. Before attempting to explain the causes for such a pattern of urban development, the evolution of the Kenyan urban system is briefly described. As shown here, the evolving urban system in Kenya has been characterised by a high degree of polarization, both in terms of rank-size distribution of urban centres, as well as spatially, in terms of the regional incidence of urbanization.

Except for the Coast, the predominantly subsistence African Society in Kenya possesed few urban centres, even of the periodic market type, before the inception of European colonial rule towards the end of the 19th Century,[28] A weak and fluctuating hierarchy of small port towns had developed along the Coast as outposts of the Indian Ocean trading system during the period before 1830. The impact of this trading system and related urban centres was, however, only confined to the Coast and had not penetrated into the interior. For a number of reasons such as relative recency of migration and settlement of the area, and relative lack of external contact, the traditional African society in Kenya, with few exceptions such as the Luhya in Western Kenya, lacked the functional organization of space associated with the centralised network of production and distribution characteristic of states and chiefdoms elsewhere in Africa.[29] Most of the large urban centres in Kenya today are therefore largely a product of European colonization and owe their genesis to the following factors:-

(a) As stations on the Kenya-Uganda rail-road (e.g. Nairobi, Nakuru and Kisumu). The railroad closely followed the path of the preceeding Arab caravan route from Mombasa into the interior. Those caravan stations which were fortunate enough to be located on the new rail-road (e.g. Naivasha) gained in importance in relation to the ones by-passed by the rail-road (e.g. Mumias and Machakos).

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28. B.W. Hodder, "Some Comments on the Origins of Traditional Markets in Africa South of the Sahara," Trans. of the IBG, Vol. 36, (1965), pp. 97-105.

29. E.W. Soja, The Geography of Modernization in Kenya, (Syracuse: Syracuse University Press, 1968), p. 10.

(b) As military/administrative posts. As shown in Fig. 1, military/administrative posts such as Nyeri, Meru, and Kisii were established in Kenya consequent upon diffusion of European colonial authority from the two centres of colonial power: initially Mombasa, and subsequently (after 1898), Nairobi.

The establishment of a transportation network and an administrative structure laid the basis for the growth of a colonial mercantile economy in East Africa dependent upon expert trade. Spatially, this was reflected in the emergence of two agricultural enclaves of export production located along the Kenya-Uganda railway: the African peasant enclave located in the lake basin at the terminus of the railway and the European settler enclave located in the White Highlands approximately half-way along the railway line.

The Kenyan urban system has evolved as a sub-system of the above colonial economic system. The first comprehensive population census in Kenya was not taken until 1948.[30] Only 5.1 percent of the country's population was classified as urban, i.e. residing in centres with a population of over 2,000 inhabitants. (Table 1). With the exception of Lamu, all the major centres were located either along the railroad corridor or in the White Highlands. A hierarchical ranking of these centres, furthermore, demonstrates a very strong degree of urban primacy (Fig. 2). The two cities of Nairobi and Mombasa accounted for approximately 72 percent of the total urban population of the country.

The 1962 Kenya population census was taken on the eve of independence.[31] Data from this census can thus be used to recapitulate the main features of the urban system that had developed during the seventy odd years of colonial rule. The number of urban centres had doubled during the 1948-1962 intercensal period (Table I). The rate of growth of urban population

30. East African statistical Department, African Population of Kenya Colony and Protectorate (Nairobi. Govt. Printer, 1950). _____, Report of the Census of Non-Native Population of Kenya Colony and Protectorate 1948 (Nairobi: Govt. Printer, 1948).

31. Republic of Kenya, Kenya Population Census, Vols. I, II and III (Nairobi: Govt. Printer, 1965/66).

amounted to a relatively high 6.6 percent per annum compared to 3.3 percent for Kenya's total population during this period. What is significant, however, is the fact that this growth had been largely concentrated in the upper end of the urban spectrum; the size distribution of urban centres in the category of above 10,000 had remained unchanged. The degree of urban primacy was thus enhanced as shown by increasingly wider deviation of the rank-size curve for urban centres in 1962 compared to 1948 from Zipf's idealised rank-size curves plotted for the respective years (Figs. 2 and 3).[32]

The last population census in Kenya was taken in 1969.[33] Despite a decade of independence, the rank-size distribution of urban centres in the upper end of the urban spectrum was virtually the same as in 1962 and 1948 (Table I). The rate of growth of urban population had gained further momentum and was then equivalent to 7.1 percent per annum. The extent of urban concentration in the city of Nairobi had been enhanced even more (Fig. 4)

Urban primacy also implies regional disparity in the incidence of urbanization. Temporally, therefore, increasing urban primacy would imply greater divergence in the regional incidence of urbanization and therefore unequal access of people from different regions to urban opportunities. In Kenya, the regional incidence of urbanization since 1948, measured as the proportion each region has of total urban population living in centres of over 5,000 inhabitants, is shown in Table 2.[34] It can be seen that the enhanced primate status of the city of Nairobi since 1948 has led to increasing regional polarization of urbanization in Kenya. The impact of this, in terms of opportunities

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32. Zipf's rank-size rule postulates that the population of a given city is propotional to its urban-size rank. The equlibrium of rank-size rule, found in many developed countries, has been argued on both statistical and probabilistic grounds.

33. _____, Kenya Population Census 1969, Vol. 1 (Nairobi: Govt. Printer, 1970).

34. To enable comparisons to be made, the 1968 boundaries have been used to calculate provincial percentages for 1948, 1962 and 1969 shown in this Table.

for migration and urban employment, is reflected, for example by the Kikuyu domination of the ethnic composition of Nairobi's African population since 1948 (Table 3). The relatively high share of the Coast Province can largely be accounted by Mombasa. The importance of Mombasa as a primate center surpassed in importance only by Nairobi is also reflected in the shapes of the observed rank-size curves plotted in Figs. 3 and 4. The slopes of these curves are not as steep as they might have been on account of a slight flattening of the upper tail-end of the curve. The pattern thus approximates a bipolarised pattern rather than the classical complete primate distribution.

Causes of Urban Primacy in Kenya

The discussion on Kenya so far has focussed on describing the structure of the evolving urban system as a consequence of the urbanization process. It has been demonostrated that the evolving urban system in Kenya during the last eighty years has been characterised by a highdegree of polarity (or bi-polarity to be accurate), both in terms of rank-size distribution of urban centres as well as spatially, in terms of regional incidence of urbanization. An attempt will now be made to explain the causes for such a pattern of urban development in Kenya. The insights obtained from studying the Kenyan case will then be used to generalise about the process of growth of primate cities in colonial spatial systems.

In common with the early American and Australian urban systems discussed earlier as well as urban systems in the rest of the Third World, the Kenyan urban system has largely evolved within an exogenous context of a colonial spatial system. The mercantile mode of economic growth dependent upon export trade in agricultural commodities that was implanted in Kenya during the early decades of this century has in many respects been continued after the independence.[35] Consequently, the two activities that constitute the economic-base or growth sectors of the two largest cities in the country are firstly,

35. International Labour Organisation, Employment, Incomes and Equality: A Strategy for Increasing Productive Employment in Kenya (Geneva: ILO, 1972).

mercantile intermediary activities such as wholesaling and ancillary services (e.g. banking and insurance) catering to long-distance export-import and distributive trade; and secondly, the export processing and import substitute industrial activities related to the mercantile function. As shown in tables 4 and 5, these two activities are largely concentrated in the two cities of Mombasa and Nairobi which have for this reason also become the prime target and destination of rural migrants. Whereas, the central place function is ubiquitious for a majority of the urban centres in Kenya, large and small. For this reason, an explanation for the growth of Nairobi and Mombasa as primate urban centres must be based on a locational interpretation of mercantile intermediary and related export processing and import substitute industrial activities, as summarised in the following paragraphs.[36]

A Locational Interpretation of the Mercantile Intermediary Function in Kenya.

The growth of Mombasa and Nairobi as primate urban centres is fairly recent and dates back to the establishment of a European colonial economic system in East Africa at the beginning of this Century. Prior to this, Zanzibar functioned as the primate centre in East Africa on account of its role as the entrepot of long-distance caravan trade. Subsequently, Zanzibar lost its entrepot functions with the demise of caravan trade based on ivory, slaves and cotton cloth ("Merikani"). A shift of the entrepot function took place from Zanziber to Mombasa at the turn of the century, and subsequently a forward projection of this function occured from Mombasa to Nairobi during the interwar period. The resulting bi-polar location of the mercantile intermediary function on Mombasa and Nairobi is a reflection of their development as strategic points in the railroad and communication network and as independent points of attachment for the lake basin peasant enclave and the Highland settler enclave, respectively, to the outside world. Such a pattern of location behaviour of intermediary activities can be interpreted in terms of three major factors: (a) information availability,

36. Based on P.A. Memon, Mercantile Intermediaries in a Colonial Spatial System: Wholesaling in Kenya 1830-1940 Ph.D. Thesis, University of Western Centario, Canada, 1974.

and, associated with this, (b) innovations in transportation and communication technology and the pattern of route development, and (c) innovations that have expanded the country's export base. The nature of each of these factors and its relative significance for the location of the wholesaling function in Kenya will be evaluated here. It should be noted, however, that these factors are closely interrelated and, therefore, do not operate in isolation from one another.

Information Availability

The availability of information is vital to the location of wholesaling activities. The wholesale trade of any city will tend to expand in direct proportion to the relative advantage that city's merchants have in the availability of commercial intelligence. Improvements in the availability and flow of information will assist in the expansion of the trade area of the wholesaling centre on which this communication flow is based at the expense of other centres, while changes in the pattern of communication will lead to locational shifts of the wholesale-trading complex.

Beginning in the 1830's, Zanzibar emerged as the primate entrepot of long-distance export-import trade in East Africa. Polarization of wholesaling activities on Zanzibar then was to a large extent a function of its superior information availability compared with other port cities along the East African coast. Its ruler was tolerant towards alien traders, and he, himself, was deeply involved in long-distande trade. It was largely through the initiative of Indian traders resident at Zanzibar and Indian finance that the diffusion of the long-distance trading frontier had been achieved on the East African mainland. The caravan system of trade that was organized from Zanzibar through Indian entrepreneurship and based on kinship and communal networks made Zanzibar the conflux of information pertaining to this trade. For this reason, East Africa's external trading partners found it most convenient to deal with Zanzibar merchants. Zanzibar thus developed as the point of attachment for the European and American firms that supplied East Africa with cotton cloth ("merikani") and bought its ivory. They tapped the intelligence potential at Zanzibar initially through infrequent shipping links followed by representation through resident agents once regular trading connections became established.

Subsequently, in the 1870's, these links were strengthened through the telecommunication and steam-ship mail service when Zanzibar was included in the international cable system and when regular mail steamer service was inaugerated with Europe and India. As a result, Zanzibar's information superiority was further enhanced compared with other East African coastal ports. This, in turn, led to an increased polarization of the intermediary function on Zanzibar.

The concentration of mercantile intermediaries at Zanzibar was further encouraged by the periodic nature of long-distance trade handled by them. Periodicity of this trade, which was a result of the fact that demand for trade goods in the interior was normally accumulated over a relatively long time period, made it necessary for merchants located at Zanzibar to cater to a very large trading area. Competition among these intermediaries was carried out not by dismemberment of the trading area but from within Zanzibar in the form of credit terms offered which made information availability imperative. The nature of information exchange associated with this trade and financing practices was largely of a non-routine and oral nature and hence demanded face-to-face contact.

Towards the end of the 19th century, the entrepot function associated with long-distance trade shifted from Zanzibar to Mombasa, and, consequently, Zanzibar gradually declined. By the end of the first two decades of the 20th century, Mombasa had replaced Zanzibar as the primate entrepot of East Africa. Even more important in terms of present-day locational pattern of wholesaling in Kenya, was the emergence of Nairobi during the inter-war period as an entrepot centre, equal in importance to Mombasa and despite its existence already as an important entrepot for East Africa. The aforementioned shift of the entrepot function to Mombasa and the subsequent forward projection to Nairobi markedly affected the evolution of the locational pattern of wholesaling in Kenya. This development was largely a function of information availability which was associated with simultaneous innovations in transportation and communication technology and the related pattern of route development and also innovations in, and expansion of, the export base.

Innovations in Transportation and Communication Technology and the Pattern of Route Development.

Improved transportation technology, like improved communication technology, enhances the locational importance of a centre whereas a changing pattern of route development associated with these innovations will alter this importance in relation to other centres.

The collapse of the caravan system of trade in East Africa consequent on the European scramble for Africa cut off the supply of commercial intelligence to Zanzibar merchants. Zanzibar's role as the East African entrepot thereby became increasingly redundant. Innovations in transportation and communication technology in East Africa precipitated a change in long-distance trade from the caravan to the railway and telecommunication mode at the turn of the century. This reduced the friction of distance on the mainland for moving goods and for commercial intelligence and, thereby, increased the range and scale of long-distance trade to an extent never envisaged or possible before. Lowering of friction of distance also increased the speed and reliability of demand satisfaction for imported goods as well as agricultural produce for export. Such demand now came to be accumulated regularly on a yearly basis of growing seasons. Long-distance trade was thereby put on a more organized basis compared with that which prevailed during the 19th century.

The pattern of route development associated with innovations in transportation and communication technology brought about a locational shift of the wholesale-trading complex in East Africa from Zanzibar, the seaward terminus of the caravan routes into the interior, to Mombasa, the seaward terminus of the Kenya-Uganda railway and telecommunication corridor. The fact that a complete re-orientation of long-distance trade from the "human" (caravan) to the "mechanical" (telegraph and railway) corridor took place attests to the superiority of the latter means of communication and locomotion. Such a re-orientation was also possible because of the very limited extent to which urban and related infrastructure had been laid out and diffused from the caravan transportation corridor in central Tanganyika.

In a manner that has been described in the Taaffe, Morrill, Gould model,[37] Mombasa gradually established its superiority over other East African coastal ports. Compared with other coastal ports, the railway and telecommunication line significantly reduced hinterland transportation and communication costs for Mombasa and, at the same

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37. Taaffe, Morrill and Gould, op.cit.

time, provided it with access to a potentially rich export producing area in the lake basin. Further increases in Mombasa's nodality were brought about by the inward extension of the Kenya-Uganda railway thus embellishing the commodity sources and market outlets for Mombasa compared with other ports such as Zanzibar and Dar es Salaam.

The emergence of Nairobi as a major entrepot centre was closely related and similar to Mombasa's raison d'etre. It was mainly Nairobi's strategic position at the entrance to the White Highlands of Kenya, along the Kenya-Uganda railway, that endowed it with a superiority of information related to settler trade. As a result, a forward projection of certain wholesaling functions took place from Mombasa to Nairobi. Nairobi's development as a distributing centre for East Africa (consequent on the increasing internalization of wholesale trade in settler agricultural produce and the organizational adaptations in the import trade and trade in locally manufactured goods handled by agent middlemen) was facilitated by its nodal position within the emerging East African transportation network.

. . Innovations in, and Expansion of, the Export Base

Changes in the staples of long-distance trade and consequent innovations and expansions in the export base of mercantile cities is the third factor influencing the location of the wholesale-trading complex. Destruction or reduction of the traditional export base of such a city may bring about its decline and a shift of the wholesale-trading function to another city as long-distance trade in alternative staples is developed. Such innovations in the export base and the engendered locational shifts of wholesaling are a reflection of the broader process of economic growth and, more particularly, the spatial incidence of this growth process, as reflected in the location of enclaves. Thus, a geographical shift in the pattern of enclave location (associated with innovation in transportation and communication technology and the pattern of route development), may bring about a shift in the location of wholesaling activities and will necessitate the development of a new intelligence system for catering to the new system of long-distance trade.

As has been pointed out, Zanzibar's importance as the entrepot of long-distance trade in East Africa derived from the fact that an

intelligence complex had developed there for long-distance trade in ivory, slaves and "merikani". Trade in all three of these commodities was inter-dependent because it was based on "commodity combining", a characteristic feature of pioneer economies. Consequently, the abolition of slavery led to a decline of this long-distance trade. Collapse of the caravan system of transportation and communication, in turn, deprived Zanzibar merchants of the information superiority pertaining to this trade and brought about the demise of Zanzibar's entrepot function.

When trade in African produce from the newly developed lake basin enclave of African peasant agriculture came to replace trade in ivory and slaves, Mombasa emerged as the new intelligence centre for this trade with the staples being robusta coffee, cotton and imported cotton piece goods. In response to this, a shift of the entrepot function from Zanzibar to Mombasa took place, and most of the new firms participating in this trade in East Africa also chose to locate at Mombasa.

The process of growth of Mombasa's wholesale-trading complex was a recursive one. Compared with other mainland port centres, Mombasa developed as the superior intelligence centre for the location of intermediary activities due to an early start and accessibility to a much larger and productive hinterland by virtue of its location at the seaward terminus of the Kenya-Uganda railway and telecommunication corridor and the associated pattern of Indian commercial expansion over its hinterland. The advantage of superior information availability at Mombasa for catering to the African peasant trade in the lake basin enclave was subsequently reinforced by the increasing agglomeration of firms participating in the expanding export/import trade as merchant intermediaries and financiers. Proliferation of the activities of these firms coupled with progressive diffusion of the trading frontier through the medium of the Indian trader and the extension of transportation network in the lake basin enclave led to the continuing expansion of long-distance trade. This, in turn, established an increasing information superiority of Mombasa for the lake basin trade and led to a further expansion of its intermediary function.

As had been the case with Zanzibar during the preceding century, continued polarization on Mombasa of the intermediary function associated with long-distance trade was further enhanced by the periodic nature of this trade. This canbe demonstrated with respect to the organization of import trade in cotton piece goods and export trade in African agricultural produce such as hides, robusta coffee and cotton (import and export trade, to a large extent, were interdependent and normally handled by the same firms). The formalization of ties between Indian merchants in Mombasa and their clients in the interior was made possible as a result of kinship and communal networks on the basis of which this periodic trade was organized. Thus, these transactions became largely routine and could be conducted by post and telecommunication. On the other hand, transactions between Indian merchants in Mombasa and European trading firms represented at Mombasa which supplied imported trade goods and bought produce for export were of a non-routine nature, emphasising the need for personal contact, as had also been the case in Zanzibar. This was made evident by the credit financing system which had evolved in East Africa and on the basis of which long-distance trade was then organized.

The development of an entrepot function at Nairobi during the interwar period was largely due to the different information inputs required for the long-distance trade serving the enclave of settler agriculture in the White Highlands of Kenya. This enclave was of a relatively recent origin compared with the lake basin enclave. It also differed from that enclave of African peasant agriculture in that it was based on European settlers from Britain and South Africa who produced a few specialized staples such as arabica coffee, pyrethrum and wheat on a large scale. Compared with the lake basin enclave in Uganda and Tanganyika, the settler enclave in Kenya was economically fragile since it had been built on an artificial and very weak economic base. Because of the high degree of uncertainty involved in the export/import trade generated by this enclave, large information inputs were required to cater to this trade. Moreover, this information was of a different type from that which was available at Mombasa since Mombasa was mainly preoccupied with lake basin trade. Mombasa was also unable to provide such information because, to a certain extent, racial factors

prevented the communication of intelligence related to settler trade to Mombasa firms. Mombasa thus provided rather limited locational incentives to firms catering to this trade, while Nairobi, which was already the social and political capital of the settler colony and located at the entrance to the White Highlands along the Kenya-Uganda railway, provided superior locational incentives. Chiefly for these reasons, a forward projection of certain wholesaling functions took place from Momvasa to Nairobi. This projection has been demonstrated with respect to the distributive trade in imports other than cotton piece goods and the wholesale trade in settler agricultural produce.[38] Subsequently, with the increasing internalization of trade in settler agricultural produce and the organizational adaptation necessitated with respect to import trade and distributive trade in locally manufactured goods in East Africa handled by agent middlemen, the hinterlands of Nairobi and Mombasa became to a certain degree overlapping.

Growth Model of the Wholesale Trading Complex of a Primate City in a Colonial Spatial System

Using the empirical evidence presented above as well as the insights obtained from elevant literature reviewed earlier, an attempt may be made now to interpret the continuous process of growth characteristic of the wholesale-trading complex and related industrial activities of primate cities in colonial spatial systems.

The economic setting of a primate city in a colonial spatia-economic system is shown in fig. 5. Such a city serves as a point of attachment for the imperial metropolis, as an entrepot for the long-distance trade between the metropolis and the colony.[39] The mercantile community of this city usually develops as the receptacle for intelligence related to the conditions of supply and demand and distributive channels in the export enclave located in the city's hinterland. Such a mature community possesses organizations for intelligence collection, experience and a variety of agglomeration economies which are necessary for the efficient conduct of this long-distance trade. Agglomeration

38. Memon, op.cit., chapters VI and VII.

39. Thus, a two-tier hierarchy of core-periphery relationship may be conceptualized. At the international level, the imperial metropolis forms the core while the colony forms the periphery. At the national level, the primate city along with the export producing areas form the core while the surrounding areas which have very few spatial linkages with the core (except for labour migration links) form the periphery.

of wholesaling and related financial intermediaries in this city takes place primarily on account of the necessity for face-to-face contact for the acquisition of commercial intelligence, what is otherwise described as the process of market appraisal.

Growth of the wholesale-trading complex of such a city is in the first place induced by an export base, that is, an external demand for resources in its hinterland. The hinterland of such a city is typically located in an extra-regional enclave of staple agriculture or mineral production to which it is connected by major lines os penetration such as railways, highways, rivers, etc. These lines of penetration largely serve as a space bridging function between the enclave and the primate city. Viewed in its role as a growth pole, the spatial incidence of the growth impact of this city is chiefly felt in the enclave which may not be physically contiguous to the primate city. The region in which such a city is located thus may not experience any significant impact from this city.[40]

The long-distance trade handled by the intermediaries in this city is as much a collecting function as it is a dispersing function. It consists of collecting produce from the enclaves for shipment to the metropolis and, in payment for this, of distributing manufactured goods. This dual function allows to carry on trade when the entrepreneurial profit from the conduct of either function might not be remunerative enough to carry on this trade.

The wholesale-trading complex of the primate city is often manned by foreign entrepreneurs, consisting of branches of trading firms, whose headquarters are located in the imperial metropolis, and of locally established bazaar firms owned by non-indigenous middle classes such as the Indians in East Africa, the Syrians and Lebanese in West Africa and the Chinese in Southeast Asia. The bazaar firms, through the commercial network that has been built up by them extending to the indigenous producers of staples in the enclave, provide the linkage between these producers and the foreign trading firms.

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40. As has been the case with Mombasa, for instance.

The wholesale-trading complex and related mercantile activities such as finance catering to long-distance trade constitute the most dynamic sector of the economic base of such a primate city as was also the case with early American mercentile cities.[41] Growth in other sectors of the city's economic base such as retailing and industrial development, is also a function of the dynamism of the wholesale-trading complex. For instance, most of the industrial development that may take place in such a city consists of either processing of export crops or import substitute industry, and is thus closely related to wholesaling. The capital input and entrepreneurship for such industrial development is usually provided by merchant middlemen from their trading profits.

The dynamic processes by which the wholesale-trading complex of a primate city in a colonial spatial-economic system expands is portrayed in Fig. 6. The chief variable in this process of growth is demand for export staples in the imperial metropolis. Initial expansion of this demand leads to the establishment of wholesaling activities in the primate city; subsequently, increasing demand for export staples along with declining transportation costs determines the velocity of expansion of this complex.

The expansion of wholesaling activities of the primate city may assume the form of expansion of existing trading concerns or the creation of new business establishments. This, in turn, provides a stimulus for the expansion of the export enclave through pressure for better transportation and communication facilities to the enclave. Transportation and communication innovation or improvement eventually leads to this expansion and to further expansion of long-distance trade generated by the enclave. This culminates in accelerated expansion of the wholesale-trading complex of the primate city and, in turn, further pressure for better accessibility to the enclave.[42] The operation of

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41. Pred (1966), op.cit., p. 178.

42. The existence of self-generating interactions through feedback relationships of this nature have also been noted by Taaffe, Morrill and Gould, op.cit., and Janelle, op.cit.

this process is shown in the upper half of the diagram (Fig. 6) through a series of feedback loops.

Other processes operating within the wholesale-trading complex of the primate city provide for further accelerated expansion of this complex through agglomeration of firms performing wholesaling and related function of financing long-distance trade. The operation of this process is described in the lower half of the diagram through a series of feedback loops which lead to agglomeration of firms in the primate city.

Expansion of the wholesale-trading complex of the primate city promotes superior information availability and the development of other agglomeration economies such as shipping and financial services, all of which serve as aids to long-distance trade.[43] This leads to the growth of the city's intelligence complex and thus to further agglomeration on the city and expansion of its wholesale-trading complex. Growth of the city's intelligence complex also leads to further expansion of long-distance trade and thereby expansion of the wholesale-trading complex.

Furthermore, the expansion of this complex also increases the probability for entrepreneurial innovations in the city by immigrant groups. Cumulation of such innovations in the primate city thus contributes directly to further agglomeration of firms and an expansion of the wholesale-trading complex. Indirectly, through the development of agglomeration economies in the city and growth of the city's intelligence complex, cumulation of entrepreneurial innovations, contributes also to the expansion of the city's wholesale-trading complex.

Moreover, expansion of the wholesale-trading complex also leads to a share of the local middlemen profits being reinvested in

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43. Besides the findings of this study, substantial support for this view is provided in the works of Vance, op.cit., Pred (1966), op.cit., and Code, op.cit., as discussed earlier.

the wholesale-trading complex. While branches of foreign trading firms in the primate city remit a major share of their profits to the imperial metropolis, most of the locally established bazaar firms invest their profits to increase their enterprise, and (at subsequent stages of increasing economic maturity) in export processing iand import substitute industries located in the primate city. Reinvestment in thw wholesale-trading complex leads to its further expansion. It also contributes towards cumulation of entrepreneurial innovations in the city and, via the resulting agglomeration of firms, toward further expansion of the complex.

Concluding Remarks and Policy Implications

By the end of the present century, Kenya's population is expected to have grown to 28 to 34 million people. Assuming a continued urbanization rate of abcutseven percent between 1969 and 1980, the urban population in 1980 will be double that of 1969 i.e. 2.2. million people. This will account for about 15 percent of Kenya's population.[44] By the turn of the century, the urban population will amount to 9 million inhabitants, based on the assumption that the current rate of urbanization of 7 percent is not going to accelerate. This will represent 30 percent of the country's total population then. However, if the experience of other countries is anything to go by, it is very likely that the rate of urbanization in Kenya will gain further momentum on account of increasing population pressure in the rural areas. Just to ensure the same level of standard of living in the year 2000 as prevailing in 1969 in the rural areas of Kenya, the productivity in the agriculture sector has to be at least doubled. Failure to this will further accelerate the propensity to migrate to urban areas.

Of equal concern is the manner in which the increased urban population will be distributed within the urban system. The projected urban figures for the year 2000 have been plotted on a double-log scale in Figs. 7a and 7b to show the expected rank-size

44. Republic of Kenya, Ministry of Finance and Planning, "Urban Population Projections During 1969-2000, Within the Context of Urban Development Strategy", Nairobi, 1974, p. 6.

distribution for that year. It can be seen that in the absence of radical policy measures the extent of urban primacy in Kenya is likely to be perpetuated and even enhanced during the next thirty to fourty years. Furthermore, the bipolar primate structure existing hitherto tis going to devolve into a classical one city primate distribution on account of unchallenged supremacy of Nairobi (Figs. 7a and 7b).

The pattern of regional polarization in the incidence of urbanization that exists today is also likely to be further entrenched as a consequence of Nairobi's primate status. As shown in Table 2, the Nairobi Extra-Provincial District will account for a lion's share of the urban population in the year 2000 followed by the Coast and Rift Valley Provinces while the Nyanza, Western, Central and Eastern Provinces comprising the former African Reserves will only gain minor increments in their respective shares. The relatively large share of the Coast Province will be mainly accounted for by the port-city of Mombasa.

Current policy pronouncements by the Kenya government indicate that although it is familiar with the problems of large cities, increasing urban primacy in the country to a considerable extent has been accepted as fait accompli. A recent document on the country's urban development strategy, for instance, rationalises the dominant position of Nairobi and Mombasa in relation to other towns as a demonstration of "the role primate cities play in a transitory economy".[45] Acceptance of urban primacy as a necessary evil is also freflected in the "large-city bias" of the policies governing resource allocation for urban infrastructure.

The policy-makers and planners in Kenya at the same time also seem to be strongly aware of the need for urban decentralization in Kenya and a strategy emphasizing the role of small district centres. For instance, one of the stated objectives "for urban development in a national development context" is

> "to encourage the expansion of several large towns in addition to Nairobi and Mombasa in order to promote a geographical dispersal of benefits arising from urban development amongst a number of centres, thereby providing more alternatives for the absorption of migrants and lessening the pressures arising from excessive concentration in Nairobi and Mombasa."[46]

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45. Ibid., p. 4.
46. Ibid., p. 8.

However, as has been shown in this paper, this is not likely to happen since Nairobi's superiority is likely to be reinforced during the coming decades. As long as Kenya's national development strategy continues to be dependent on an exogenous orientation, Nairobi and to a lesser extent Mombasa will continue to be the prime location sites for urban-based economic activities and for the rural migrants from the countryside.

TABLE 1

Urban Centres by Size and Population
1948, 1962 and 1969

Size of Centre	No. of Centres 1948	1962	1969
Over 100,000	1	2	2
20,000 - 99,999	1	4	2
10,000-19,999	2	3	7
5,000 - 9,999	3	11	11
2,000 - 4,999	10	16	26
Total	17	34	48
Total Urban Population ('000)	276	671	1082
Percentage of Population in Kenya.	5.1	7.8	9.9

Source: Population Censuses for the respective years.

Table 2. Kenya: Regional Distribution of Urban Population[a]

Provinces	1948 No. of centres	1948 Urban popul.	1948 Percent of national urban	1962 No. of centres	1962 Urban popul.	1962 Percent of national urban	1969 No. of centres	1969 Urban popul.	1969 Percent of national urban	2000[b] No. of centres L	2000[b] No. of centres H	2000[b] Urban population L	2000[b] Urban population H	2000[b] Percent of national urban L	2000[b] Percent of national urban H
Nyanza	1	10,899	4.31	1	23,436	3.78	2	38,511	3.86	12	13	660,000	835,600	9.71	9.13
Western	0	0	0	0	0	0	1	6,244	0.63	11	11	244,100	342,400	3.59	3.4
R. Valley	3	32,156	12.73	6	90,035	14.53	7	110,951	11.12	24	29	858,100	1,192,500	12.63	13.03
Central	0	0	0	4	32,438	5.2	3	35,993	3.61	19	19	549,100	711,000	8.08	7.77
Nairobi	1	118,976	47.10	1	266,794	43.1	1	509,286	51.02	1	1	2883,200	4,200,000	42.42	45.89
Eastern	0	0	0	3	16,047	2.59	4	26,658	2.67	19	19	433,000	446,700	6.37	4.89
N. Eastern	0	0	0	0	0	0	0	0	0	0	3	0	15,900	0	0.17
Coast	2	90,614	35.86	3	190,903	30.81	4	270,546	27.11	10	10	1169,100	1,408,500	17.20	15.39
TOTAL	7	252,645	100	18	619,656	100	22	998,189	100	96	105	6797,300	9,152,600	100	100

Notes:

a. Defined as population resident in centres of over 5,000

b. The 2 projections for the year 2000 are indicated as L (Low) and H (High)

Source: Same as Table 1.

Table 3: Tribal Composition of City of Nairobi's Population

Tribe	1962	1969
Kikuyu	65,560	191,367
Kamba	23,864	60,716
Luhya	26,332	65,056
Luo	24,870	62,865
Others	5,620	27,732
Total	156,246	407,736

Source: same as Table 1.

Table 4: Kenya: Distribution of Wholesaling by Number of Employees and by Turnover, 1960

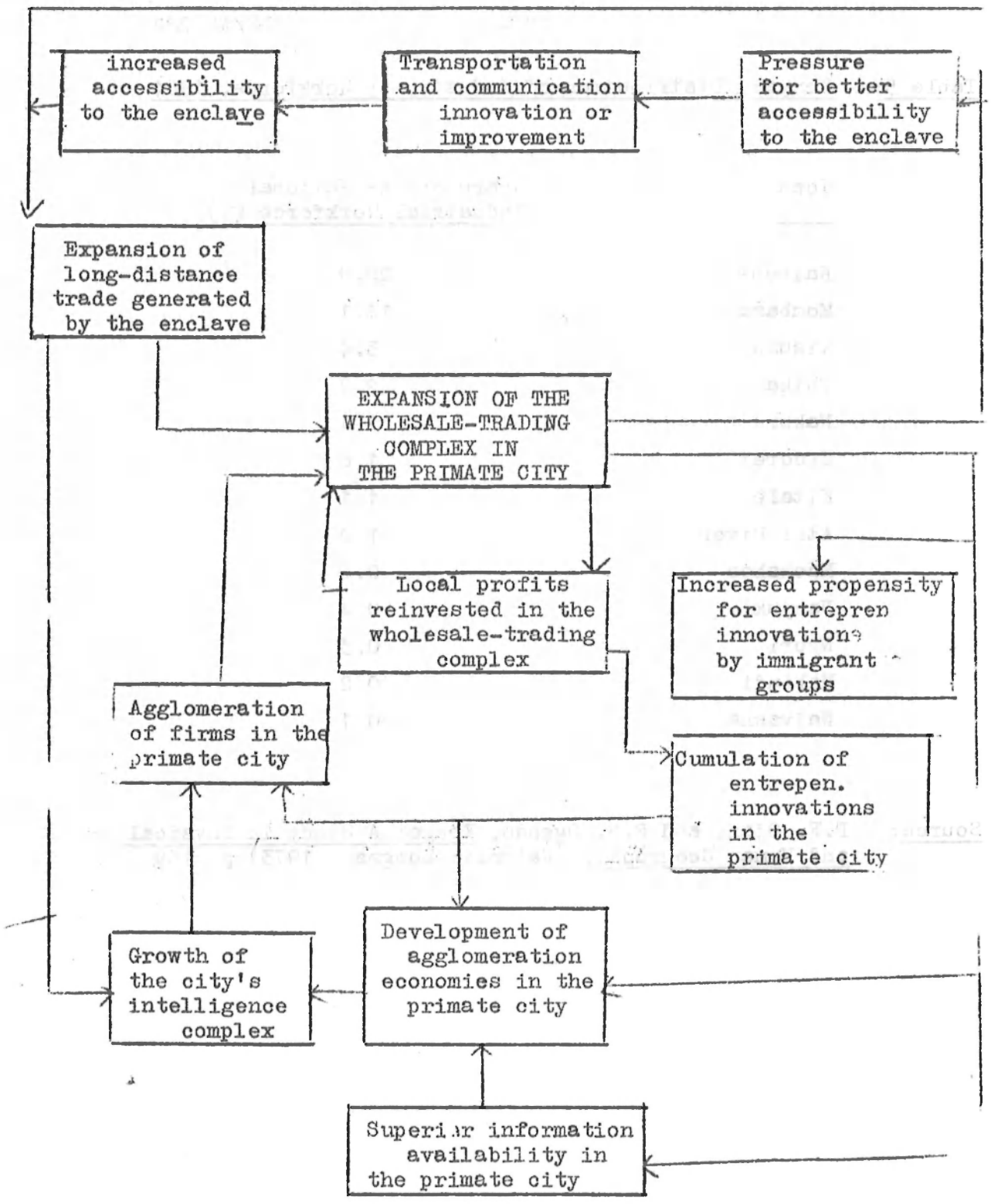
Location	% of Total Number of Employees Engaged	% of Total Wholesale Turnover
By Province:		
Nairobi	46	49
Coast	27	35
Central	6	5
Nyanza	9	5
Rift Valley	9	5
Southern	1	1
Northern	-	-
By Selected Areas:		
Nairobi	46	49
Nine main towns (except Nairobi)	44	45
Rest of Kenya	10	6

Source: Republic of Kenya, Survey of Distribution, 1960 (Nairobi: Ministry of Finance, 1963), Text table 2.2

Table 5: Kenya: Distribution of Industry by Workforce, 1964

Town	Share of the National Industrial Workforce (%)
Nairobi	28.9
Mombasa	11.1
Kisumu	3.4
Thika	2.7
Nakuru	2.4
Eldoret	1.8
Kitale	1.1
Athi River	1.0
Machakos	0.6
Nanyuki	0.4
Nyeri	0.3
Malindi	0.2
Naivasha	0.1

Source: F.F. Ojany and R.B. Ogendo, Kenya: A Study in Physical and Human Geography, (Nairobi: Longman, 1973) p. 169



The Circular and Cumulative Process of Growth of the Wholesale-Trading Complex of a Primate City in a Colonial Spatial System.

Fig. 6.