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LAND TRANSACTIONS IN KIAMBU

By

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Abstract

The paper examines Land Transactions in Kiambu District from 1956, the beginning of the Land Registration process, to 1971; against a background of classical Land Value Theory hypotheses, namely that the value of land will decline with distance from a central market point - in this case Nairobi and that the volume of transactions will also vary inversely with distance from such a point.

Part II examines in greater detail the nature, and process of land transactions, focusing on tenure, and the monetisation of the land transactions process which has resulted in fragmentation of holdings in the District. Other aspects of land processes, such as registration and rural credit are treated briefly.

The study suggests the need for more studies of the effect of the Nairobi economy on the peri-urban zone and the 'newer' land processes in the district - namely the movement from the Traditional areas to the new areas of settlement in the formerly scheduled areas.

LAND TRANSACTIONS IN KIAMBU*

By James G. Karuga**

INTRODUCTION:

The 'Land Question'. has remained central to Kenya's, and Kikuyu politics in particular, for the last 70 years. Colonial Commissions and Govt. Missions[1] have engaged in trying to unwangle the issues of tenure, and more recently, the economic Implications of Land Reform. But perhaps no single Commission achieved such fundamental change (rather than revolution) as did the Swynerton Plan, of 1954[2], which resulted in massive land consolidation and registration of titles in Central Province between 1956 and 1960. After the successful consolidation and registration of titles in Central Province, agricultural reform in other parts of Kenya has been predicated on the acceptance of similar land reform.[3] Not only does consolidation reduce the waste of time and land occassioned by operating many small scattered holdings, but registration of titles also gives security to the owner, so that he may be able to borrow for agricultural improvements. But above all, registration gives the authorities control on land transactions which would result in fragmentation.

It is common knowledge, however, that a great deal of fragmentation has been going on in Central Province since the completion of the registration process in 1960, despite this control. So far, however, there has been no systematic investigation of this process. Land still remains a taboo research problem, largely due to the emotive political background against which past land issues have been discussed.

But the land question cannot long be ignored by researchers. Land processes in the Kiambu area, present a fertile testing ground for some classical land value hypotheses and more significantly, the problems and processes encountered now in Kiambu will become more prominent in other parts of the country, with similar demographic and agricultural characteristics, such as Kisii.[4] Moreover, given the legacy of large villages in Kiambu, particularly those within a radius of 10 miles from Nairobi, some of the land processes currently taking place, point to patterns of African suburbanisation, which the City planners cannot

cannot ignore in the coming years. A study of land processes in Kiambu may also provide clues to the problem of the proletarisation of the peasantry which may be of interest to political scientists.[5] What follows then is a modest attempt to explore some of these problems.

In part one, we examine the data on land Transactions in Kiambu since 1956 against the background of Land value and Location Theory Analysis. The hypotheses are: 1) Land values decline with distance from Nairobi. 2) The frequency and volume of Land transactions decreases with distance from Nairobi. 3) The value of transactions will rise over time. Our data tends to confirm the 1st hypothesis, though, as will be pointed out in the section on Methodology, the gradient of the land value curve needs to be interpreted with caution, since our measure of distance was an approximation to the nearest market centre in each of the 10 sublocations. Evidence from our data suggests that there are in fact 3 sub markets for land in Kiambu, each distinct from the other. The overall out off points lie in the regions of 15, 30, and 40 miles. What is interesting though, is that over the years, these out off points have shifted, establishing clear boundaries for the various land markets. The current operational boundaries seem to be 10 miles (the residential market), and 20 miles, the area of intensive gardening, and 35 miles. The differences between the first submark, i.e. the area most adjacent to Nairobi, and the other two is most marked. This submarket is characterised by a preponderance of small transactions, valued more highly which suggests more intensive land use and a transformation from agricultural to residential use. Some of the pieces of land are too small to be of any other use except for residential purposes. The differences between the other two submarkets are not so acute, and one would have to control for other factors such as soil fertility, crop productivity and accessibility more stringently to explain the differences.

As far as hypothesis 3 is concerned, evidence suggests that land market was fairly domant till 1967, when land values began rising very rapidly. The period 1962-1966, was a period of stagnant prices. Infact, prices fell below the 1956-63 level, as can be seen from Fig.8. However, the mean value of the transactions was high, which suggests that a considerable acreage changed hands, though at a low average price per acre. One possible explanation of this is that this period of low average prices per acre coincided with the period of settlement schemes in the former scheduled Areas, and as is well known,

many people sold their holdings in the Central Province to get a larger holding in the Rift-Valley. As far as trends in the 3 submarkets are concerned, it is clear that the 1st submarket has been consistently buoyant whereas for the other 2 submarkets, the trends are not so clear. On the whole, the prices of land have increased by as much as shs 600/= per acre between 1967 and 1970, from an average of sh. 900/- per acre between the period 1960 and 1970, to sh.1500/- per acre. There are signs that this trend will continue to rise in the near future.

struck by the number of people who said they had purchased their land holdings, or alternately by the increasingly large number of land owners who had migrated from their traditional land holdings in Kiambu, to farms in the Rift-Valley Province, or some parts of Tanzania. In order to find out whether these trends were peculiar only to Kiambaa (i.e. the Location nearest Nairobi) or prevalent in the whole of Kiambu District, we decided to take a district-wide sample of land holdings and examine the structure of transactions since registration of land titles. Furthermore, following some well known propositions in hand value Theory (see Part one), we decided to collect data on all rounded transactions in 10 sublocations, selected randomly from the 83 sublocations into which Kiambu is divided. These 10 sublocations were GATHAGE, MAKWA, and HANDEGE in Gatundu Division, GITARU and MUTUINI in Kikuyu Division, RUAKA in Kiambaa Division, KIJABE and MAMIRITHU in Limuru Division, GATHIEKO and GATHANGARI in Githunguri Division. Together, these 10 sublocations represent nearly 4000 farm units, or nearly 8% of the farm units in Kiambu District. The sublocations are also geographically distributed so that we have land units in the relatively dry and poor areas of Makwa in Lower Gatundu, and the relatively inaccessible Handege sublocation in upper Gatundu, which is adjacent to Muranga District; to the well situated Ruaka sublocation and the distant Kijabe sublocation on the flanks of the Rift-Valley.

Ecologically also, the sublocations represent various land use potentials, from the low lying areas of Makwa, suitable for pineapple and sisal, to Gathangari Tea Zone in Githunguri, and Coffee in Ruaka and Pyrethrum in Kamirithu in Limuru Division. Dairying is a prominent feature of the sublocations which are nearest Nairobi, and which are well served by rainfall, i.e. over 40 in. per annum /NB. All the sublocations fall within this zone, except for Makwa which is between the 30 in and 40 in. Isohytes?/

In terms of population, the 10 sublocations are very similar, with most of them having a density of 400 persons per sq.km. except for Gitaru and Ruaka, which have densities of 900, and 600 respectively. Inorder to examine hypothesis 1 and 2, we took as the measure for distance, the most direct Country Bus Route, to the various market centres, as shown in the - Survey of Kenya Road Maps for Central Province. In a country where car ownership is very small, but private bus operations fairly frequent. the relevant measure of accessibility to markets (Nairobi in particular) is the route taken by the country buses. Measuring distance to a common centre in a sublocation is a rather arbitrary procedure as it gives the

in space. Furthermore, the element of topography of Kiambu - the country slopes to the S.E and is truncated into numerous ridges and riverlets - makes movement from Nairobi to the North, N.E and N.W (where our sublocations are located) rather difficult. The result is that distances are in some cases longer - particularly for the sublocations such as Handege, and Gathangar: which are located further inland from the main roads. Our measure of distance should therefore be interpreted with caution since it does not correspond to 'pure' distance in 'a featureless plain' beloved of Location theory. The importance of the measurement of distances becomes clear in the analysis of the various submarkets, where our attempts to establish the cut off points depends not only on the measurement of distance per se, but also on the - relative - significance of the various market centres. Whereas Nairobi serves as a clear commercial centre, the significance of the other Locational markets is not so clear. We would, however, expect such a centre as Limuru - which has a significant industrial population, to have a greater impact on the agricultural and residential decisions of the surrounding areas - thus, forming a nuclei for further growth. Our analysis may, however, underestimate the significance of such other rural centres as Kiambu Township and Githunguri Township, around which similar complex processes may be taking place. Our impressions, however, are that Limuru is a more influential market centre than either of the other 2 markets.

1 - 2 SOURCES OF INFORMATION

Inorder to cover the whole district, it was necessary to take as our unit of analysis, the farm unit, rather than the farmer himself. Consequently, we examined information contained in the Land Registry for each farm unit in our 10 sublocation since the date of registration. As will be seen from analysis of land in the District in part 2, most of the land had been registered by 1962. Information on Land is divided into 2 sections: 1) Farm units.
2) Town Plots.

Farm Units are theoretically supposed to be above 3 acres, and Town Plots, below 1 acre. The 'town' plots refer to the holdings in the old villages which were established as centres of population during the State of Emergency i.e. 1952 - 1960. Though these have virtually disappeared in other parts of Central Province; they have instead increased in size and population in Kiambu District, serving as 'domitories' for a large commuter population into Nairobi. Our analysis is concerned with 'Farm Units'. But as shall become evident on examination of Land Distribution in Part 2, there are a significant proportion of Farm units below the original requirement of 3 acres.

There were as of Dec. 31st, 1970, 39519 Farm Units and 32,475 Town Plots in Kiambu District. Thus there were 72,394 Registered Land units in Kiambu /all these figures are from the Kiambu Land Registry Files/. All Freehold land units are registered in the green files, and the Leases in the 'white' files; in a format reproduced in Appendis A. Technically, the information contained in these forms was accurate, and the Land Officer in charge of Kiambu showed great competence and knowledge of most of the transactions. Where a farm unit had undergone more than 2 'officials' transactions, a separate file was established for that farm unit. These files were highly intricate and presented a more realistic picture of the Land Transaction process than the Land Registry Files. I was allowed to examine these, but unfortunately, the impersonal approach of record sources and the need to streamline the data into statistically managable variables means that the sociological and humane elements in the process have been obscured; and our analysis is that much poorer.

1 - 3 THE LAND TRANSACTION PROCESS:

If one wants to sell land, he must apply to the Land Control Board for consent and follow the procedure laid down by the Land Control Act of 1967. The Land Registry's main function, besides keeping records of all land transactions, is to advise the land Control Board on the legal matters of land transfers. Technically, the Land Control Board is not supposed to approve a sale if the seller cannot furnish alternative means of subsistence is the event of the sale. But in practice, the clan rather than the Land Control Board, exercises this prerogative. Ninety percent of the Land Registry's Office time is therefore spent advising and recording transactions between various parties. The main administrative functions of the Land Registry is to ensure that as many transactions are legalised to minimise litigations arising from informal bargains which are not honoured - as in the case where one land holder may 'sell' land to 2 prospective buyers !

Evidence from the Land Officer suggests that far from minimising the value of litigations, Land Registration has increased the administrative costs of formalised, rather than traditional transactions. Land Registration undoubtedly establishes the legal status of ownership, but it is doubtful whether it minimises litigations. Furthermore, whereas the clan may have had some restraining influence in Land Transactions particularly sales under the Traditional processes, individual ownership increases autonomy of action which makes for a larger volume of transactions, and the increased possibility of dispossession. In the context of rapid transformation, Land Titles become liquid assets to the holders - easily exchangeable for cash in the case of outright purchase, or for use as colateral in case of borrowing from banks. Where values are rising as in the residential submarkets nearest Nairobi, the temptation to capitalise on this asset. becomes irresistible,particulary if there

are other outlets such as settlement schemes and farming companies in the Rift-Valley, where the money could buy a larger holding. What happens when this frontier closes, is of course anyone's guess.

Apart from the legal intricacies of the transaction process which would tend to discourage people from reporting transactions, there is the further deterrent of a Land Registration and Transfer Fee. There is also the fear that Land Registration may be used for tax assessment. This would tend to encourage under reporting of value of transactions, though the figures in our study tend to correspond to the current trends in the various submarkets. On the whole, our data may underestimate the volume of transactions, rather than the level of transactions.

1 - 4 DATA ANALYSIS:

Ordinarily, inorder to test the hypotheses that the value and volume of transactions are inversely proportional to the distance from Nairobi, one would have to run a regression of value and volume on distance to get the relevant R^2. But since our data is discretely grouped, this approach would involve for more complex estimation procedures which are more expensive in computer time. Instead we chose a simpler approach of frequency analysis and cross tabulations, supplemented by graphs. Though this may not give a rigorous treatment of the data, particularly in view of hypothesis 1; we nevertheless believe that the approach adequately represents the current processes. Furthermore, our approach enables us to analyse more deeply the structure of land transactions as in part two, which would be obscured in a straight forward regression analysis, though regression analysis would enable us to be more confident on the interpretation of trends. However, we hope our graphical analysis correctly identifies the trends, though we cannot be sure of the rate of change (slope) of the various transactions. This is not a great drawback for the earlier periods, when the land market was fairly dormant - (see Figs 3,7,8 mean value by period, by subl, and mean value per acre, & mean value of trans, by year); But as the Land market becomes more active - particularly since 1967, more sophisticated methods become necessary to identify any speculative processes that may be at work.

PART ONE: LAND VALUE THEORY AND LAND PROCESSES IN KIAMBU:

2 - 0 LAND VALUE THEORY AND LOCATION ANALYSIS:

The classic statement on Land value theory originates from VON THUNEN analysis of agricultural production in relation to a single market in 1826. More recently, however, many other writers have dealt with the problem of location of productive activities in space.[8] Their focus has primarily been on industrial activity, though the original thesis was propounded in relation to agricultural rent theory. To this extent, our approach follows the classical tradition of Von Thunen though we shall not deal explicitly with his concentric land-use patterns. This will be covered implicitly in part two.

Assume that costs of production for a particular crop, say mushrooms, do not vary with distance from a common market centre.[9] Assume, also that the land is uniformly fertile, such that land can be taken as a homogenous good. Further assume that land is a featureless plain, so that transport costs depend only on distance from the centre. If we produce 30 lbs of mushrooms /it could be anything/ from 1 acre at the market centre, for a cost of say 10/= and sold them at a price of sh 1/- per lb. then we would make a profit of sh. 20/-. If we produced at a distance from the market centre, we would have to pay transport costs of say 5 cents per mile. At this transport rate, and producing at a distance of 10 miles, transport costs would be sh. 15/- so that total costs of production would be shs.25/-, so that profit would be sh.5/-. At a distance of 13½miles, with same production costs and transport rates, profit would be zero. At this point, the producer would just break even.

Thus, it is possible, after Alonso,[10] to derive a Rent /Land Value/ function of the form:

$$R(t_o) = N\,[P_c - C - K_c(t_o)]$$

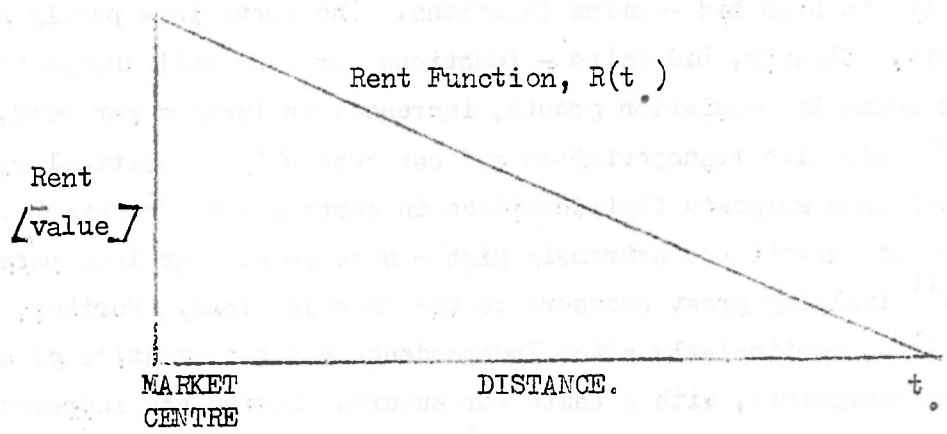
Where $R(t)$ is the Rent per unit distance t_o from market.

N N = Number of units of crops produced.

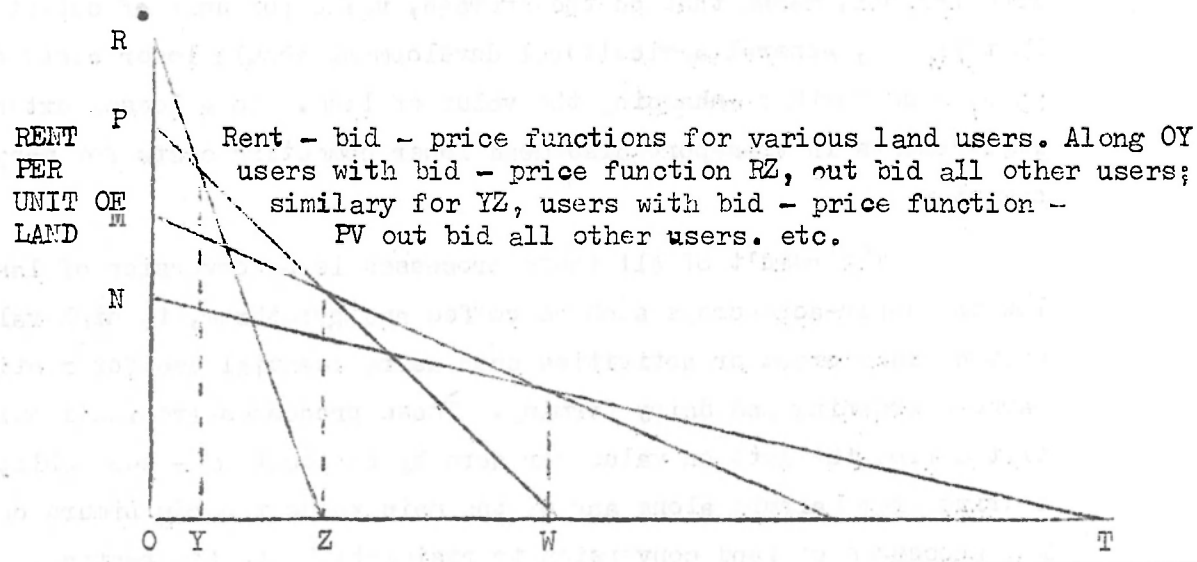
C = Total cost of producing 1 unit of the crop.

$K_c(t)$ = Cost of transporting 1 unit of produce to market distance t_o.

P_c = Price per unit of the crop at the market.



Beyond t_c, the rent would be zero, (but not the value). Clearly $R(t_c)$ can vary with changes either in P_c, the price of product, or C, the cost of production, or $K_c(t)$, the transport rates. All these variables are important, but to understand the structure of land markets, it is necessary to move from this partial analysis to a generalised analysis by relaxing the assumptions of uniformity in costs of production, transport rates, and admitting of the possibility of multiple use of land. This properly integrates Location analysis and Rent theory. When we conceive of space as a differentiated commodity, then we have a multiplicity of rent functions of different gradients for the various uses, viz:



Rent - bid - price functions for various land users. Along OY users with bid - price function RZ, out bid all other users; similary for YZ, users with bid - price function - PV out bid all other users. etc.

OY, OZ, OW, and OT correspond to Von Thunen's rings, depicting various land use zones (sub markets).

Competition for use of land amongst potential buyers will result in differently 'peaked' rent or 'bid - price functions' which rise at different rates. The strong 'bidders' will occupy the more central location, and equilibrium in land use patterns will be achieved when all land is being used by the users with the highest bid - price functions, otherwise it would pay the individual land holder (or society in the Pareto optimum sense) to transfer land from

low - bid to high bid - price functions. The above is a purely static analysis. Clearly, bid price - functions for land will change over time with changes in population growth, increases in incomes per head, and improvements with transportation and car ownership in particular. Demographic evidence suggests that densities in certain parts of Kiambu, particularly near Nairobi are extremely high - some as high as 1000 persons per sq.km.[11] implying great pressure on the existing land. Further, the growth of Nairobi, particularly after Independence and the creation of an incipient African bourgoisie, with a taste for suburban living has increased the demand for residential land within commuting distance of Nairobi. This factor is further reinforced by the fact that many of the top civil servants, who may not traditionally have had much land (by virtue of their age), and whose homes are in Kiambu district, find it not only prestigous to set up a good home in the rural areas, but also very profitable to engage in dairy farming and market gardening for the Nairobi Market.

Improvements in transport facilities in the rural areas lowers the transport costs of garden produce, thus increasing value of hitherto inaccessible land, or land generally given to low value, long period crops, such as coffee. Improvements in transport, coupled with increased demand from Nairobi, means that on the average, value per unit of output increases. Furthermore, general agricultural development should lower costs of production, thus further enhancing the value of land. To a lesser extent, improvements in transport also mean lower commuting costs for many low income commuters.

The result of all these processes is a conversion of land from low value-per-acre crops such as coffee and pyrethrum, to high value-per unit of land crops or activities such as residential use for renting, and market gardening and dairy farming. These processes are indirectly substantiated from the data on value per acre by sublocation - see Table.....
A drive from Nairobi along any of the main roads towards Limuru confirms the processes of land conversion to residential use for renting.

The next section examines land transactions in light of the above hypotheses and observations.

2-1 LAND VALUE AND DISTANCE FROM NAIROBI

This section examines Land Transactions in Kiambu District, taking the element of distance as the main explanatory variable of both the value and volume of transactions. As observed earlier, our measure of distance is an approximation to a common centre, which implies a clustering of transactions at several single points. This is an analytical simplification

which enables us to make generalisations by abstracting from the features of topography and assuming that each of the sublocations represents a single point a long a radius from a common point, i.e. Nairobi. The sublocations, are, however, not uniformly distributed, and hence, as can be seen from the table below the intervals between them is not uniform, though they conviniently

Table: 1
KIAMBU LAND TRANSACTIONS : VALUE, PROPORTION AND FREQUENCY OF MONETARY TRANSACTIONS BY DISTANCE FROM NAIROBI.

SUBL.	DIST IN MILES	TOTAL UNITS IN SUBL	TOTAL WITH TRANS	TOTAL MONE-TARY TRANS	SAMPLE PERCENT OF TOTAL UNITS	TRANS PERCENT INSUBL	PERCENT WITH 2 OR MORE TRANS	PERCENT OF MONE-TARY TRANS	MEAN VALUE PER ACRE SH.
RUAKA	6	432	138	97	11.66	32	19.6	70	1535
GITARU	10	324	92	60	7.60	27	26.6	66.6	1382
MUTUINI	14	62	11	9	1.00	17	0	82	1636
KAMIRITHU	20	535	167	99	14.10	32	19	59	1110
GATHIEKO	21	311	74	53	6.25	25	10.8	72	1073
GATHANGARI	24	768	315	238	26.5	41	26.5	75	940
GATHAGE	27	372	69	57	5.8	18.5	13	83	1435
HANDEGE	34	740	237	143	20.0	31	24	61	732
MAKWA	35	445	51	39	4.3	11.5	8	76	982
KIJABE	38	213	33	29	2.7	15	30	88	814
	TOTAL	3902	1185	824	100.0	33.0	21.54	69.5	1075

Source: Figures on Total units in sublocation are from Kiambu Land Registry. Others are calculated from various crosstabs and frequency distributions of output of Datatext Programme.

rise by units of approximately 5 miles, we may therefore conceive of Nairobi as the centre of several arcs spaced at intervals of 5, 10, 15, 20, 25, 30, 35, and 40 miles.

As can be seen from Fig.1, the mean value per acre of land declines with distance from Nairobi - with the exception of Mutuini, and Gathage, where the transactions were too few and the variance too high, respectively for us to include them in fitting our line of best fit.

The values range from sh. 1500 per acre at distances less than 10 miles, to about sh.750/- per acre at about 35 miles. Thus there is a drop in the value of land of about sh.30 per acre per mile from Nairobi. Since there is not much difference in the productivity of the land on the whole - at least up to 25 miles, this difference can be taken as a measure the trade off between distance - transport costs, and the productivity of land as one locates away from the central market-Nairobi, or from the source of employment for commuters.

If however, we limit our analysis to more than token value transactions, i.e., those valued at more than sh. 1000 per acre, we get a very interesting picture of the land market in Kiambu with regard to distance from Nairobi. As can be seen from Fig. 4, 'the bid-price function' AKB, has a kink at K, at 20 miles suggesting a zone of indeterminancy in land market processes. It is interesting that the curve for the medium value of transactions has a kink also at the same distance. There is, however, a 'hanging' segment HG for upper Githunguri, Gatundu and Kijabe. This is most likely a reflection of the development of tea as a cash crop in this area. We shall consider the structure of these submarkets in more details in part two. At present, what seems significant is that there is 1% drop in the proportion of high valued transactions for every mile away from Nairobi, thus supporting our hypothesis that value of land declines with distance from Nairobi.

2-2 VOLUME AND FREQUENCY OF TRANSACTIONS AND DISTANCE FROM NAIROBI:

The result of competition for space near the central market or employment centre ceteris paribus, should result not only in higher valued transactions (i.e. more steeply sloped bid-price functions) but also a greater volume of transactions, and a higher turnover of land. But other things are not always equal or constant. Transport costs will differ with distance from Nairobi, due to pure element of distance, and more significantly accessibility. particularly the standard of feeder roads from the main trunk roads and the main bus routes.[13] Moreover, there are other smaller interior 'nodal' points around which particular processes may be at work. Limuru, located at 20 miles North of Nairobi, is such a centre with the large Bata Shoe Factory,[14] a thriving commercial centre, and the tea and pyrethrum plantations and small scale holdings, it forms a small nucleus or 'pole' of opportunities which should draw a significant volume of land demand. Finally, other crops may be gaining in significance in the more remote parts of Kiambu, particularly on the 8000 ft, altitude tea and bracken zone. As population pressure increases, the land frontier is extended and more and more marginal land is brought into the use, and hence, into the land market.

Mention should also be made of the importance of the old villages which form small commercial markets. Of the 10 sublocations, in our sample 7 are listed as Village Centres, with populations ranging from Gathangari with nearly 5000 to Handege with about 2000.[15] The above explains why there is a tendency for peaking in the volume of transactions around Limuru and Gathangari, as depicted in Fig. 2.

As far as the turnover of land is concerned, we cannot be very sure of the trends in the various submarkets, partly because of the probability of under reporting[16] of transactions, inorder to avoid excessive Registration Fees, and the fact that only about 20% of the sample were reported as having undergone more than 1 transaction. The proportion of land units with 3 or more transactions was only 2%, such that for each sublocation or distance, the values would be very insignificant. Figure 5, however, suggests that there is a high turnover around the 10, 25 and 40 mile radius, which roughly coincide with the centres of our 3 submarkets the residential market at 10 miles, the medium sized, high potential tea zone, at/and the 'new' frontier at around 40 miles, i.e. at Kijabe. What is interesting, though, with regard to the peaking of transactions, is that whereas, 10 years ago, the peaks occured at 10, 20 and 30 miles (see Fig 3), there has been a shift to 5, 15, and 25 miles distance, particularly since 1966. This suggests the beginning of the consolidation of land use patterns, with the land nearest Nairobi being put to high valued use (residential), and a corresponding rise in value of land located at 15 miles. The structure of this process, is, however, impossible to discern from the aggregate data, and fuller explanations of these processes must await more detailed analysis of each sublocation in Part II.

20 miles

2-3 VALUE OF TRANSACTIONS OVER TIME.

In the short run, the supply of land is, for purposes of analysis fixed. The increase in incomes, population and prices of crops, should therefore, ceteris paribus, tend to drive land rentals or value up. How much the prices will rise depends of course on both elasticity of demand and the fixity of supply. One of the historical features of Kiambu is that it has always been under extreme pressure of shortage of land, so that there has always been an outmigration into the Rift-Valley. This possibility of outmigration (increase in supply of land) explains why there is an observed drop in prices per acre after 1961, when settlement schemes offered an outlet for the densely populated areas, and for the low income groups. Though there still exists this possibility of outmigration, it is not so strong now, and certainly requires more sacrifice and greater costs on any would be settler into the Rift-Valley. Our explanation of land values must therefore reflect the increasing land pressures and the growth of incomes per head in the District over time.

In interpreting the trends of value over time, we must be wary of the significance of values in the early period 1956-63, when there were relatively few transactions - (on the average about 30 monetary transactions

per annum). The notable feature of values per acre over time is that between 1960, and 1967, the price averaged about sh 900/- per acre, and have risen by about sh.200/- p.a. an acre from 1967-1970, a trend which shows signs of continuing even more vigorous in the near future. /see Fig 7/.

The period 1963 - 1968, witnessed a larger volume of transactions, averaging about 120 monetary transactions per annum. The meansize of these transactions was on the whole above the median size holding of 3.9 acres - which suggests that medium sized holdings of 4.0 and above were exchanged at this period at relatively constant prices. The significant aspect of this process is that it coincides with the period of settlement schemes, which provided a better opportunity of increased income from larger plots in the Rift-Valley. But such a hypothesis must await testing from a study which interviewed land holders inorder to trace the previous holders - to estimate how many land holders in this period sold their-traditional holdings in preference for more land in the Rift-Valley, or how many were forced to sell and thus dispossessed, by other circumstances e.g. school fees.

2-4 TRANSACTIONS OVER TIME BY DISTANCE:

Figure 8, once again confirms our hypothesis 1, that values of land will decline with distance from Nairobi. As observed above, land values declined in the period 1964-1966, a period which was characterised by above medium size transactions. The period 1967 - 1970, has seen a recovery in land prices in all the sublocations./Figs 3, and 8/ But the most remarkable recovery has occured in the 1st. sub market, i.e. at about 15 miles radius from Nairobi; where the rate of increase in prices is twice as fast (sh 400/- per acre), as the increase at about 30 miles at a rate of approximately sh. 200/- per acre. This last observation further supports our impression that the 1st. submarket is more active, and that values are on the whole, above average. /see Fig.4, and 8 in particularly/

So far we have examined the value, and frequency of transactions against distance and time. We have noted that values per acre do decline with distance from the central point - Nairobi; but that the volume and frequency of transactions are a more complex process, though 3 district sub-markets of land could be recognised. We have also observed that Land values on the whole rise with passage of time, though the rate of change on the whole is not very rapid. However, there are signs that the land market is becoming active once again, particularly in the zone around a radius of 15 miles from Nairobi.

The next section aims at highlighting the patterns and structure of land transactions in the district by examining such variables as size, ownership, registration status, type of transactions and lending, by value and sublocation. Such an analysis should make explicit the characteristics and differences between the various submarkets, and provide better clues to the observed trends in value.

PART TWO: LAND DISTRIBUTION + MARKET PROCESSES IN KIAMBU:

3-0 LAND DISTRIBUTION BY SIZE:

Inorder to understand land distribution in Kiambu it is essential to take note of the large pressure of European Settlement in the district. Large coffee and tea estates are a feature of Kiambu agriculture, and for a long time have provided an outlet for casual labour from the densely populated African Areas. This pattern of European settlement had 2 consequencies for African Land ownership in Kiambu:-

1 (a) During the colonial era, they provided effective barriers to expansion of African Agriculture by both physically limiting the area of land available to African farmers, and more significant, by controlling African cash crop development, particularly coffee.

(b) In the post Independence era, the presence of European settled areas has proved a boon to two classes of people:

(i) Those African farmers near the settled areas have benefited from the creation of settlement schemes out of the former European farms. This is particularly true in the Limuru Division where plots in nearby settlement schemes have offered a more lucrative alternative to medium holdings in the former African reserves, and in part explains why medium sized farms have changed hands at Kamirithu sublocation. /see Table 6 below/

(ii) The new African bourgoisie, particularly top civil servants and reasonably well to do businessmen have been able to buy the formerly European farms, with help from the Agricultural Finance Corporation. Such farms are often farmed intact, but there are indications that where difficulties of loan repayments occur, subdivision of the 100 acre farms into smaller (20 acre) which are then sold to meet the loan repayments is occuring.[17]

(2) The greatest consequence of this European settlement was perhaps the great inequality of distribution of land which exists in Kiambu to-day. As can be seen from Table 2 below, 90% of the land units in Kiambu are less than 5 hectares, (i.e. approximately 12 acres). However, these 90% of land units occupy only 36% of the land area! Even more staggering is the fact that 3 coffee estates occupy as much land as 30,000 farm units! Assuming that each farm unit could support a minimum of 2 people, this means that 3 coffee estates occupy land which could support 60,000 persons.

Table 2: LAND DISTRIBUTION IN KIAMBU DISTRICT:

SIZE IN HECTARES	NUMBER OF FARM UNITS	HECTARES	PERCENT OF FARMS	PERCENT OF HECTARES	CUMILATIVE PERCENT FARMS	CUMILATIVE PERCENT HECTARES
0 - 0.49	10407	2352	19.46	1.41	19.46	1.41
0.50 - 0.99	7646	3991	14.30	2.39	33.76	3.80
1.0 - 1.9	12424	13525	23.23	8.10	56.99	11.90
2.0 - 2.9	10194	18307	19.06	10.97	76.05	22.87
3.0 - 4.9	7858	22182	14.69	13.29	90.75	36.16
5.0 - 9.9	3823	19222	7.15	11.51	97.90	47.67
10.0 - -19.9	868	17837	1.62	10.68	99.51	58.35
20.0 - 49.9	65	1351	0.12	0.81	99.63	59.16
50.0 - 99.9	84	4912	0.16	2.94	99.80	62.10
100.0 - 199.9	38	5805	0.07	3.48	99.87	65.58
200.0 - 299.9	26	4972	0.05	2.98	99.92	68.56
300.0 - 399.9	15	4263	0.03	2.55	99.95	71.11
400.0 - 499.9	9	4247	0.02	2.54	99.96	73.66
500.0 - 999.9	7	5046	0.01	3.02	99.98	76.68
1000.0 -1999.9	6	5534	-	3.31	99.99	79.99
2000.0 -3999.9	5	14629	-	8.76	-	88.76
4000.0-19999.9	3	18718	-	11.21	-	99.97
TOTAL	53478	166893	99.98	99.95	99.99	99.97

Source: 1) KENYA: STATISTICAL ABSTRACT, 1970, STATISTICS DIV. MFEP Table 79 (a)

2) AGRICULTURAL CENSUS, 1968, (Large Farm Areas), Statistics Div. Ministry of Economic Planning and Dev. Table 1 (a).

We raise this issue of plantation agriculture in high potential zones, not because bwe believe that the coffee estate are necessarily inefficient or unproductive, but because we believe that given the current prevalence of minute holdings - [see Table 3 below], particularly in areas adjacent to these large coffee estates - e.g. Ruaka and Gitaru where as much as $\frac{1}{3}$ of

the holdings are listed as under 1 acre; there is a fundamental issue of Equity involved.

Table 3: KIAMBU LAND DISTRIBUTION : SIZE BY SUBLOCATION BY DISTANCE FROM NAIROBI: PERCENT.

DIST SIZE	TOTAL PERCENT	6 RUK	10 GIT	14 MUT	20 KAM	21 GTO	24 GTI	27 GTE	34 HNG	35 MKA	38 KJB
Upto 1 Acre	19.6	34.50	38.20	9.09	13.17	35.62	15.71	27.54	10.21	17.65	-
1.1-2.0	15.9	21.32	17.98	54.55	14.37	28.77	13.14	30.43	9.79	23.53	-
2.1-4.0	20.1	17.65	22.47	27.27	16.17	9.59	18.59	18.84	20.43	33.33	48.48
4.1-6.0	21.7	19.12	17.98	9.09	23.95	15.07	21.15	15.44	27.23	19.61	27.27
6.1- 10	16.7	6.62	3.37	-	23.35	8.22	21.47	7.25	24.26	5.88	21.21
10.1 +	5.8	0.74	-	-	8.98	2.74	9.94	-	8.09	-	3.03
TOTAL	100.0	100	100	100	100	100	100	100	100	100	100
Mean	3.17	2.4	2.3	3.27	3.56	2.3	3.4	2.44	3.69	2.7	3.78
Median	3.0	2.0	2.0	3.0	4.0	2.0	4.0	2.0	4.0	3.0	4.0
SD	1.52	1.3	1.2	0.96	1.5	1.4	1.5	1.24	1.4	1.39	0.87
N*	1176	136	89	11	167	73	312	69	235	51	33

* Omits holdings below 0.1 of an acre and these above 30 acres.

If we take land under 5 hectares as representative of the area under African cultivation, Table 3 shows that nearly 80% of these holdings are under 6 acres. The above table clearly demonstrates the minuteness of holdings in Kiambu - nearly 1/5 are under 1 acre, which indicates an advanced degree of fragmentation, contrary to all the goals of the Swynerton Plan, and far below the agricultural officer's optimum farm size.

Table 3 further confirms our impressions that the degree of fragmentation is furthest advanced in the areas around Nairobi - over half the land units in Ruaka and Gitaru are below 2 acres. The median holding in these 2 sublocations is also below the overal median of 3 acres, though beyond 20 miles, the patterns are not so clear.

With the exception of Gathage at about 30 miles which has a high proportion of below average size holdings, there seems to be an increase of land size, the further away from Nairobi one gets. The proportion of land holdings 6.1 acres and above rises from about 10% at 10 miles or less to about 33% at 20 miles, and 37% at 35 miles; and then drops to about 25% at 40 miles - at Kijabe.

If we consider the 3 submarkets identified in Part I, and Fig.2, it is clear that the patterns of fragmentation follow roughly the same peaks

/Fig.9/ though the differences between the Limuru/Upper Githunguri and Gatundu markets is not very sharp. However, an examination of land distribution by size and ownership in the various sublocations reveals some interesting patterns of land processes:

3-1 LAND DISTRIBUTION BY OWNERSHIP:

Table 4 below shows that the larger the piece of holding, i.e. above 6 acres, the more likely it is that it has been inherited, rather than bought. This is not surprising, considering that at a mean price of sh. 1000/- per acre, it would require 6000/- in cash to buy a holding of six acres. This figure is well above what most people in the rural areas can afford. Moreover, selling a large holding of about 6 acres in the rural to involve the welfare of many / other members of the clan, so that objections are likely to be raised, thus minimising the possibility of a sale.
What seems to happen is that large holdings are passed on to sons informally (i.e. they are not registered as transactions or subdivisions, though inorder to establish the legal status of the MURAMATI /Trustee/ it may be registered under one son's name or several sons under SUCCESSIONS-IN-COMMON).

These sons are most likely to be younger than the MURAMATI and, hence, likely to have had education - the post - traditional substitute for land as a form of security. It is likely that since most of these sons may be away in cities or in farms in the Rift-Valley, they may sell their shares, thus explaining the high prevalence of purchases of small holdings as evident in Table 5. This movement of land purchases has apparently become entrenched. Nearly 70% of all the land in the district is now owned after some form of purchase, or a transaction which involves money.

Table 4. KIAMBU LAND DISTRIBUTION : SIZE BY OWNERSHIP : PERCENT.

OWNERSHIP IN PERCENT SIZE	PURCHASES	SUCCESSIONS	LEASES	TOTAL
Upto 1 Acre	22.8	12.6	50.0	20.7
1.1 - 2.0	16.8	13.2	-	15.8
2.1 - 4.0	21.8	15.6	-	20.0
4.1 - 6.0	20.8	24.0	50.0	21.8
6.1 - 10	13.6	24.3	-	16.6
10.1 +	4.1	10.2	-	5.8
TOTAL PERCENT	71.7	28.1	0.2	100
N	850	333	2	1185

Table 5: KIAMBU: LAND DISTRIBUTION: OWNERSHIP BY SIZE: PERCENT.

SIZE IN ACRES / OWNERSHIP	0.1-1.0	1.1-2.0	2.1-4.0	4.1-6.0	6.1-10.0	10.1+	TOTAL
PURCHASES	81.9 194	76.5 143	78.1 185	68.6 177	58.9 116	50.7 35	71.7 850
SUCCESSIONS	17.7 42	23.5 44	21.9 52	31.0 80	41.0 81	49.3 34	28.1 333
LEASES	0.4 1	-	-	0.4 1	-	-	0.2 2
TOTAL PERCENT	20.0	15.8	20.0	21.8	16.6	5.8	100
N	237	187	237	258	197	69	1185.

This high degree of non-traditional ownership suggests that land on the whole is passing to a new class of people. Who these people are, is, in the absence of data on the socio-economic characteristics of current land buyers, difficult to surmise. Is land passing on to total strangers from other districts in Central Province? What is the occupations of land buyers? Are they previous land holders? Do they have other sources of incomes such as from business, and employment? What is. (their) educational level; family size and age composition? All these are relevant variables if we are to make sense of current trends in the Land market. In the absence of direct information particularly on socio-economic characteristics, our interpretations can only be treated as informed guesses rather than generalised statements of fact.

It appears that the current land trends reflect an inter-generational change over of land ownership from the old pattern of clan ownership to individual ownership by younger sons who then pass it on to other younger persons. One of the results of land registration and titles is that it makes for a highly fluid market situation. Land Titles become a liquid assets which can be transferred easily, particularly if the land is small /see Table 5 above on Purchases by size/ and used as collateral for borrowing money from private as well as public agents. /see Table 17 below/. The new class of owners are likely to be younger and more affluent than the previous owners. They are also likely to be men of independent means - businessmen who came back from detention and found their land confiscated or greatly underestimated. They are also likely to be younger professionals (school teachers) who were too

young to inherit any land during the demarcation process, in the 1950s.[16]

Equally important, I believe, is the fate of the original 70% land holders who sold their land to the current land owners. It is hard to believe that all these were absorbed into the settlement schemes. If they were, it would imply that settlement schemes have been inhabited by people from Kiambu only, which is highly unlikely. Thus one suspects that a significant group of people are being dispossessed in the rural areas.

Finally, we should note so far as African land ownership is concerned, Leases are totally insignificant - at least registered Leases to individuals, as is evident from Tables 4 and 5 above. This, however, does not mean that people do not cultivate other peoples' shambas on an informal and temporary basis. As is evident in Table 9 below, 'Gifts' are a significant part of land transactions, and one suspects that informal leases are often included in this category. However, we shall examine this in more details, in the section in Type of Transactions.

3-2 LAND DISTRIBUTION: SUBLOCATION BY SIZE BY OWNERSHIP.

Table 6 below, and Fig.10 reflect more clearly the patterns and processes at work in the land market in the various sublocations and submarkets. Given the higher prices in the areas nearest Nairobi /see Fig.1 and Fig.4/ it is understandable that large purchases are rare in this zone. On the other hand, the fact that this area is most accessible to Nairobi makes it attractive for residential location, thus explaining the high proportion of purchases below 1 acre.

It is interesting to note that in Kijabe, which is on the frontier of Kikuyu land, nearly all the land there has been purchased. Again, this suggests the need for a follow up study of migrants out of Kiambu, to see what happened to the previous owners of land in this area. Such a study is also overdue in view of the observed increase in the rate of migration to the new farm - co-operatives and companies in the Rift-Valley. In particular, it would be useful to know the effect of out migration on land size and productivity - does it tend to increase size of holding, and does production drop with new ownership, and what other transactions occur once land has changed hands? We shall attempt to answer some of these questions on the section on transactions and combinations. But unfortunately, we have no data to estimate the effect of land transactions on productivity of land. One suspects that there is a period of a drop in productivity during the changeover, in the period of negotiation and uncertainty of ownership, but thereafter productivity would depend on the income, education and training of the new farmer.

Table 6: KIAMBU: LAND DISTRIBUTION :

SIZE BY OWNERSHIP / SUBL	0.1 - 1.0		1.1 - 2.0		2.1 - 4.0	
	PUR	SUC	PUR	SUC	PUR	SUC
RUK	35.7	35.9	24.5	12.8	17.3	17.9
GIT	40.0	30.0	18.6	15.0	20.0	30.0
MUT	9.1	-	-	-	54.5	-
KAM	18.4	3.2	18.4	7.9	17.5	14.3
GTO	45.3	14.3	18.9	52.4	9.4	9.5
GTI	19.8	1.5	14.9	6.0	21.0	10.4
GTE	26.3	29.0	23.7	38.7	26.3	9.7
HNG	14.3	3.9	13.0	2.6	21.1	18.4
MKA	13.9	26.7	27.8	13.3	36.1	26.7
KJB	-	-	-	-	50.0	-
TOTAL PERCENT	81.9	17.7	76.5	23.5	78.1	21.9
TOTAL N	194	42	143	44	185	52

SUBLOCATION BY SIZE BY OWNERSHIP:

(PERCENT):

4.1 - 6.0		6.1 - 10.0		10.1 +		TOTAL		TOTAL
PUR	SUC	PUR	SUC	PUR	SUC	PUR	SUC	BOTH
17.3	20.5	5.1	10.3	-	2.6	71.0	28.3	99.3
18.6	20	2.9	5.0	-	-	77.8	22.8	100.6
27.3	-	9.1	-	-	-	100	-	100
26.2	20.6	17.5	33.3	1.9	20.6	61.7	37.7	99.4
15.1	14.3	9.4	4.8	1.9	4.8	71.6	28.4	100.0
22.6	16.4	13.3	50.7	8.5	14.9	78.7	21.3	100.0
15.8	16.1	7.9	6.5	-	-	55.1	44.9	100.0
20.5	40.8	24.8	22.4	6.2	11.8	67.9	32.1	100.0
13.9	33.3	8.3	-	-	-	70.6	29.4	100.0
28.1	-	18.8	100	3.1	-	97.0	3.0	100
68.6	31.0	58.9	41.1	50.7	49.3	71.7	28.1	99.8
177	80	116	81	35	34	850	333	1183

4-0: KIAMBU: LAND TRANSACTIONS:

This section examines the transactions that take place once land has changed hands. In particular, it examines the patterns of ownership which result from purchases - do those who purchase sell the land later on, or do they pass it on; and what are the trends in the various submarkets. We should note however, that the data does not refer to aprticular piece of land, but rather, refers to all lands in general. The analysis does not therefore give a sequential trend for any particular piece. This does not mean that the various lands do not undergo more than I transaction. They do. [see Table 8 below]. Neither does it mean that the process of land transaction is as simple as is made out in the tables, (which analyse each transaction against the background of the immediately previous transaction rather than trace out all the intermediate transactions). The transactions can be extremely complex, and though it is possible to trace this from the private Land Board Files (which I did), such intricacy of detail is necessarily cumbersome in tabulations. Instead, we used the simple expedient out of this by treating every 2nd and 3rd transaction as a transaction involving a new land tunit, thus swelling our sample slightly. This, however, does not significantly affect our results as the proportion of lands with more than 2 transactions was only 3%.

4-1 LAND REGISTRATION + LAND TRANSACTIONS

Before we deal with the problem of land transactions, a brief examination of the status of land registration is essential, particularly in view of the observed lag (see Table 7 below) between the date of registration, transaction and date of issue of certificate. By 1961, most of the land had been registered, but only 2% had been issued with certificates of Title, though already 14% had undergone some form of transactions.

As late as 1967, only 40% had been issued by certificates of Title, but nearly 70% had undergone transaction. This suggests a great administrative lag in land registration. This is not surprising, given the fact that Land Adjudication is one of the most complex processes in Kikuyu history, and one wanders how long the whole process would have taken under normal political conditions, and not the military conditions of the State of Emergency in 1952 - 1960.

Further, this lag suggests that many transactions are currently taking place without the knowledge of the Land Registry. The increase in number of certificates issued between 1967 and 1970 may reflect an improvement in the registration proficiency, though it could very well reflect a

Table 7: KIAMBU LAND TRANSACTIONS: DATE OF TRANSACTIONS AND LAND REGISTRATION:

YEAR	TOTAL REGISTERED	CUMILATIVE PERCENT REGISTERED	TOTAL CERT. ISSUED	CUMILATIVE PERCENT CERT. ISSUED	TOTAL TRANS.	CUMILATIVE PERCENT TRANS
1956	122	10.30	1	0.08	-	
1957	118	20.25	1	0.17	1	0.08
1958	851	92.07	3	0.42	34	2.95
1959	3	92.32	2	0.59	61	8.10
1960	-	-	-	-	26	10.30
1961	8	93.00	19	2.19	48	14.35
1962	4	93.33	8	2.87	49	18.48
1963	33	96.12	40	6.24	83	25.49
1964	-	-	93	14.09	131	36.54
1965	4	96.46	124	24.56	146	48.86
1966	6	96.96	98	32.83	146	61.18
1967	4	97.30	90	40.42	109	70.38
1968	3	97.55	116	50.21	108	79.49
1969	13	98.65	90	57.81	86	86.75
1970	11	99.58	151	70.55	114	96.37
1971*	5	100.00	57	75.36	43	100
NOT GIVEN	-	-	292	100.00	-	-
TOTAL	1185	100.00	1185	100	1185	100

* Figures are for the months of January and February only.

change in the type of new buyers or land owners from close neighbours and clan members who would trust the traditional forms of sanction and authority in establishment of legal claim to land, to younger, possibly more distant buyers, who are suspicious of local sanctions against future seizure of land and hence more eager to formalise their claims to the land by registration at the Kiambu Land Office. It may also reflect an increase in confidence in modern institutions on the part of land owners from a realisation of the benefits (such as loans) which acrue from formalising land ownership. This process seems farthest advanced in the areas around Nairobi, as is evident from Fig.6, where the proportion with Date of Issue of certificate is lower compared to the proportion of transactions involved.

4-2: VOLUME AND FREQUENCY OF TRANSACTIONS:

We have noted in Part I that transactions will increase over time due to changes in income levels, population growth and increases in demand for land for agricultural and residential uses. Table 7 above shows that

transactions have increased at the rate of nearly 10% per annum since 1963. The early period of the 1960, was marked by a low volume of transactions - partly due to political uncertainty about whether land consolidation was an irreversible process after all; and partly because the process of adjudication was still going on in some places.

As can be seen from Fig. 7, the volume of transactions is still rising and more significantly the values per acre are rising even faster than the rateof growth of transactions. As an indication of this rising volume of transactions, we may observe that in the first 2 months of 1971, for which we had data, nearly a third of the transactions which had occured in 1970, had already taken place.

With regard to differences in the volume of transactions between the various sublocations, we observe from Table 8 below and Fig.5, that there are 2 areas of active land processes - in the Ruaka, Gitaru and the upper Githunguri - Tea Zone around Gathangari and Gathage markets. Our knowledge of upper Kiambu is not as intimate as for South Kiambu, so we cannot offer substantive hypotheses about the causes of the observed patterns of land transactions. For example we do not know what the effect of introducing tea as a cash crop in this area is on land prices, nor the decline of pyrethrum as ca cash crop in Limuru area.

Table 8: KIAMBU LAND TRANSACTIONS: NUMBER OF TRANSACTIONS. (PERCENT).

SUBLOCATION	1	2	3	TOTAL
RUK	80.43	17.39	2.17	100
GIT	73.33	20.00	6.67	100
MUT	100	-	-	100
KAM	80.24	17.96	1.8	100
GTO	89.19	10.81	-	100
GTI	73.57	23.57	2.87	100
GTE	86.9	8.70	4.35	100
HNG	75.95	22.78	1.27	100
MKA	92.16	7.84	-	100
KJB	69.70	30.30	-	100
TOTAL	78.46	19.26	2.28	100
N	929	228	27	1185

4-3: DATE OF TRANSACTION BY SUBLOCATION:

Implicit in our hypothesis 3, is the view that the areas nearest Nairobi would experience market pulls first, and would therefore show a higher

activity in the land market in the earlier periods, say before 1965. Table 9 below, however, shows no such trends. Instead the land market was experiencing the same diffuse forces in this period.

If we omit Mutuini and Kijabe (both with relatively small observations), we do, however, get a distinct pattern of greater activity in the land market in the 1st submarket, in the period after 1967. The proportion of transactions which occured between 1967 and 1971 declines from 57% of all transactions in Ruaka sublocation at approximately 6 miles to 30% at upper Gatundu. Indications are that the other submarkets may stabilize in the near future, but the first submarket is likely to be even more active in the future. This area is likely to prove a cheap locating ground for the medium income Kikuyu population of Nairobi, who cannot compete in the extremely expensive Nairobi land market. Already, land prices in the Riruta and Kangemi Sublocations (areas which previously were similar to Ruaka and Gitaru, but nearer Nairobi) stand at sh.10,000/- for 0.25 acre residential plot. Since this research was undertaken by Feb 1971, there are indications that the search for land has shifted further interior towards Ruaka and Gitaru. /Nbi. Fig.3 indirectly suggests this trend/.

Table 9. KIAMBU LAND TRANSACTIONS : DATE OF TRANS. BY SUBLOC. (PERCENT):

SUB.	TOTAL	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	TOT
RUK	138	0.72	4.35	3.62	1.45	0.72	1.45	5.80	6.52	8.70	9.42	7.25	10.14	11.59	21.01	7.25	100
GIT	90	-	-	6.67	2.22	4.44	1.11	7.78	8.89	12.22	13.33	6.67	8.89	13.33	7.78	6.67	100
MUT	11		9.0	-	-	-	9.9	-	9.0	-	18.18	-	18.18	9.0	18	9.0	100
KAM	167		1.8	8.98	2.40	12.57	5.39	3.59	10.78	3.59	11.38	8.38	11.38	6.59	8.98	4.19	100
GTO	74	-	-	-	1.3	2.7	9.46	16.22	13.51	10.81	14.86	13.51	12.16	4.05	1.35	-	100
GTI	314	-	-	2.87	3.18	2.55	3.18	6.05	12.10	16.88	14.01	11.15	7.96	7.64	8.28	4.14	100
GTE	69	-	5.8	1.45	5.80	1.45	8.70	8.70	11.59	10.14	14.14	13.04	5.80	5.80	8.70	2.9	100
HNG	237	-	8.44	8.02	0.84	4.22	4.22	8.44	11.81	15.61	9.28	7.59	8.86	4.64	7.17	0.84	100
MKA	51	-	-	9.80	-	5.88	3.92	5.88	15.69	17.65	9.80	11.76	-	3.92	11.76	3.92	100
KJB	33	-	-	-	-	-	3.03	6.06	6.06	9.0	33.3	3.03	18.18	6.0	15.15	-	100
TOTAL	1184	0.08	2.87	5.15	2.20	4.05	4.14	7.01	10.98	12.33	12.33	9.21	9.12	7.26	9.63	3.63	100

MEAN	65
MEDIAN	66
SD	3.3
N	1184

4-4 : TYPE OF TRANSACTION BY SUBLOCATION: LAND TENURE IN GIKUYU COUNTRY:

We have already noted above (3-3 and Table 6) the predominance of purchases as a form of ownership. In this section, we shall examine in greater detail, the form such transactions take in the various sublocations, in the context of Gikuyu Land Tenure.

Table 10 below shows that nearly 60% of all transactions have been individual purchases, with only 8% purchases in common. Further, successions in common are rare, only $\frac{1}{3}$ of the successions are registered under joint ownership. This is not unusual, given that 'ITHAKA CIA NGWATANIRO' (land held in common) were rare even in traditional society.[19] Ordinarily, land

Table 10: KIAMBU LAND TRANSACTIONS: SUBLOCATION BY TYPE OF TRANSACTION: (PERCENT):

TYPE / SUBLOC	SINGLE PURCHASE	COMMON PURCHASE	SINGLE SUCCESSIONS	COMMON SUCCESSIONS	GIFT	TOTAL
RUK	62.32	7.97	10.14	5.80	13.77	100
GIT	56.67	8.89	12.22	3.33	18.89	100
MUT	54.55	27.27	-	-	18.18	100
KAM	55.09	4.19	9.58	8.98	22.16	100
GTO	66.22	5.41	8.11	5.41	14.86	100
GTI	67.52	7.64	9.87	5.73	9.24	100
GTE	75.36	5.80	7.25	1.45	10.14	100
HNG	48.10	11.81	21.52	2.53	15.61	100
MKA	68.63	7.84	11.76	1.96	9.80	100
KJB	84.85	3.03	-	-	-	100.0
TOTAL	61.23	7.94	11.82	4.73	14.19	100
N	726	94	140	56	168	1185

would have been held jointly by members of the clans with eldest son most often as the MURAMATI or trustee to ensure that all who had a legal claim to the land, had access to use of the land. Under Gikuyu land tenure therefore, everyone was assured use of land, be he a MUHOI - one who acquires cultivation rights on NGONDO or Lands of another landowner, a MUCIARWA, a man adopted into the family of a clan, through a religious ceremony, a MOTHONI, an in-law, or a MUTHAMI - one who acquires building rights or cultivation rights or both by virtue of being a migrant from another part. In Gikuyu society, therefore, landlessness - i.e. no access to use of land, was non-existent.

But this does not mean that all people owned land. As sketched above, there were various forms of tenure, the most important of which was

land ownership through direct purchase (by payment of several goats) and the performance of various religious ceremonies. The important thing to note about this traditional structure is that it afforded a means of livelihood to all adult members of the tribe and their descendants. Further more, these rights to use of land were enshrined in tribal folk lore and custom, sanctioned by the community, and adjudicated by the elders or KIAMA.

In the small ridge-line community of the Gikuyu society, the legitimacy of each claimant to land could easily be established. Further, if the tribal sanctions could not establish indisputable ownership, the land frontier was still wide open, and an industrious man could, in a generation, establish a new GITHAKA - land, on which to settle his MBARI or clan.

Current land purchases are therefore not a strange phenomenon in Gikuyu society. What is surprising is that the category of land gifts, should be substantially pervasive even at this juncture in the 20th century. Most of the gifts were, however, often very small pieces - usually for building a homestead, or some piece of land, say 3 acres passed on to an in-law who is landless at a nominal price. It is significant that this process shows no great variation between the various sublocations, which suggests that though the land market may be heating up, there are some vestiges of traditionalism which ameliorate the effects of land dispossession which occured during the land consolidation process.

How much longer this process of GIFTS is likely to last is difficult to assess. Its existence will depend on the response of land owners to land market forces and their traditional beliefs. The more monetised the transactions become the less likely it is that land owners will resist the temptation of asking a money price for the land. But so long as in-laws continue to honour the institution of UTHONI - i.e. the relationship between the clans or family of the bride and groom, gifts of land to young landless grooms will continue. Unfortunately, our data does not help us to evaluate these relationships, and we cannot therefore pursue this line of explaination any further. Instead, the next section examines the process of monetisation of land transaction by focusing on the value of transactions by size of land, the mean and median values of transactions in the various sublocations, and the changes in these variables over time and the nature of land transfer process, i.e. what happens to land once it has been bought or inherited - does it then pass to a new owner by purchase or succession or by Gift?

4-5: MONETISATION OF THE LAND TRANSFER PROCESS:

As already noted in the introduction, one of the drawbacks of using the farm unit as the unit of analysis, is that we cannot trace the relationships

between the buyer and seller of land. Table 11 below, therefore, suffers from that defect. However, the table provides a useful insight into the cycles if not the relationships between buyers and sellers, through which land passes in the transfer process. It shows that land once bought is likely to pass on to a new owner through the monetary porcess. i.e. by being resold. The fact that very few successions have occured from purchases, indirectly suggests that the new land purchasers are relatively younger, with no grown up sons to pass on land to as yet.

Table 11: KIAMBU LAND TRANSACTIONS: TYPE OF TRANSACTION BY OWNER BY SUBLOCATION : (PERCENT).

OWNERSHIP / TYPE OF TRANS		PURCHASES	SUCCESSIONS	TOTAL
RUAKA	Purchases	92.8	15.4	70.3
	Successions	2.0	48.7	15.9
	Gifts	5.1	35.9	13.8
GITARU	Purchases	82.8	5.0	65.6
	Successions	7.1	45.0	15.5
	Gifts	10.0	50.0	18.9
MUTUINI	Purchases	81.8	-	81.8
	Successions	-	-	-
	Gifts	18.2	-	18.2
KAMIRITHU	Purchases	93.2	3.2	59.3
	Successions	2.9	44.4	18.6
	Gifts	3.9	52.4	22.2
GATHIEKO	Purchases	90.5	23.8	71.6
	Successions	-	47.6	13.5
	Gifts	9.4	28.6	14.9
GATHANGA-RI	Purchases	90.0	13.4	75.2
	Successions	5.2	53.7	16.5
	Gifts	2.8	32.8	9.2
GATAGE	Purchases	94.7	64.5	81.2
	Successions	5.3	10.9	8.6
	Gifts	-	22.6	10.1
HANDEGE	Purchases	85.1	6.6	59.9
	Successions	8.7	56.6	24
	Gifts	5.6	36.8	15.6
MAKWA	Purchases	97.2	26.7	76.4
	Successions	-	47.7	13.8
	Gifts	2.8	26.7	9.8
KIJABE	Purchases	87.5	100	87.8
	Successions	-	-	-
	Gifts	12.5	-	12.1

The table also suggest that the 'gifts of land' are more likely to originate from lands acquired in the traditional processes - i.e. successions, then through the monetary process of purchases. A cross reference to Table 1 above shows that gifts are likely to be more prominent in those sublocations with below average monetary transactions.

The prevalence of purchases of land from previously purchased land, may also suggest an incipient land speculation process in the rural areas. The character of such a process is hard to establish across all the sub-locations. But as Table 12 below shows, the process is likely to be concentrated in the small sized farms, with nearly a third of the high valued transactions (1501-10,000) being in the category of 0.1 - 1.0 acres. The proportion in this category drops systematically from 27% at 0.1 - 1.0 acres, to about 1% at 10 acres and above. The colorally of this, is that the larger the piece of holding, the lower the price per acre.

Table 12: KIAMBU LAND TRANSACTIONS:

VALUE OF TRANSACTION BY SIZE OF HOLDING: (PERCENT)

SIZE IN ACRES / VALUE IN SH.	0.1 - 1.0	1.1-2.0	2.1-4.0	4.1-6.0	6.1-10.0	10.1+	TOTAL
0	17.3	20.9	24.1	36.4	46.2	56.5	30.5
100-600	5.9	13.9	22.8	18.6	24.9	20.3	17.3
601-1000	29.1	29.4	30.4	23.3	17.8	18.8	25.7
1001 - 1500	20.7	27.3	16.0	13.6	7.6	2.9	16.0
1501 - 10000	27.0	8.6	6.8	8.1	3.6	1.4	10.5
TOTAL PERCENT	20.0	15.8	20.0	21.8	16.6	5.8	100
N	237	187	237	258	197	69	1185

Inorder to have a better picture of the land monetisation process, it would be essential to have data on changes in value by size over the years. Our data unfortunately does not enable us to pursue this line of analysis. Instead, the factor of size is subsumed in the the analysis of value by sublocation over the years 1956 - 1963, 1964 - 1966, and 1967 - 1971, as in Table 13 below.

Table 13: KIAMBU LAND TRANSACTIONS: VALUE OF TRANSACTION BY SUBLOCATION BY PERIOD (PERCENT):

VALUE BY PERIOD / SUBLOC.	0			100 - 600			601 - 1000			1001 - 1500			1501 - 10,000			TOTAL PERIOD			TOTAL
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
RJK	40	20	30	12	8.8	6.3	12.0	17.6	11.4	16.0	38.2	17.7	20.0	14.7	34.2	18.1	24.6	57	100
GIT	40.0	25.8	35.9	-	9.7	7.7	10	19.4	12.8	45.0	22.6	12.8	5.0	22.6	30.8	22.2	34.4	43	100
MUT	-	-	33.3	-	-	16.7	50.0	33.3	-	50.0	-	16.7	-	66.7	33.3	18.2	27.3	54.5	100
KAN	55.2	34.9	31.8	3.4	2.3	12.1	12.1	20.9	21.2	25.9	34.9	27.3	3.4	7.0	7.6	34.7	25.7	39.5	100
GIO	40.9	6.9	43.5	-	13.8	13.0	40.9	62.1	8.7	18.2	10.3	13.0	-	6.9	21.7	29.7	39.2	31.1	100
GTI	33.9	20.6	24.4	26.8	33.8	16.3	30.4	36.0	26.0	5.4	5.9	17.1	3.6	3.7	16.3	17.8	43.2	39.0	100
GTE	18.2	18.2	16.0	9.1	4.5	4.0	31.8	36.4	28.0	36.4	31.8	28.0	4.5	9.1	24.0	31.9	31.9	36.2	100
HHG	56.8	25.3	37.7	25.9	345	21.7	12.3	33.3	23.2	1.2	6.9	13.0	3.7	-	4.3	34	36.7	29	100
MKA	30.8	13.8	31.8	15.4	4.5	18.8	46.2	50.0	3.75	-	22.7	12.5	7.7	9.1	-	25.5	43.1	31.4	100
KJB	33.3	18.8	-	-	375	42.9	33.3	37.5	50.0	33.3	-	-	-	6.3	7.1	9.1	48.5	42.4	100

1 = 1958 - 1963
2 = 1964 - 1966
3 = 1967 - 1971.

The 1st period represented the period of political uncertainty about the finality of land consolidation. During this period, rumours were rampant that an African Government would reverse the Land Consolidation process. This element of uncertainty affected both the volume and value of transactions. The second period, 1964-66, represents the period of settlement schemes, which is reflected by a drop in the proportion of non-monetised transactions, across all the sublocations as in Table 13 above. The third period, 1967 - 1971 reflects the beginning of the rapid rise in value of transactions across all sublocations. [see column 5 of Table 13 above, and also Fig.7]

Overall, however, the values of transactions remains moderate, at a median value of sh. 3000/=, as can be seen from Table 14 below.

TABLE 14: KIAMBU LAND TRANSACTIONS: VALUE OF TRANSACTION BY SUBLOCATIONS.

(PERCENT)

VALUE IN SH. / SUBLOC	0	100 - 1,000	1,100- 2,000	2,100- 4,000	4,100- 6,000	6,100- 10,000	10,100 - 20000	TOTAL	N	MEAN	MEDIAN	SD
RUK	29.93	18.25	22.63	13.87	4.38	8.76	2.19	100	137	2796	3000	1.67
GIT	33.33	22.22	17.78	14.44	4.44	6.67	1.11	100	90	2589	2000	1.57
MUT	18.18	9.09	9.09	9.09	27.27	18.18	9.09	100	11	4091	5000	1.9
KAM	40.96	7.83	16.87	15.06	7.23	9.64	2.41	100	166	2783	3000	1.8
GTO	28.38	37.84	17.57	6.76	6.76	2.70	-	100	74	2338	3000	1.2
GTI	24.60	19.17	17.89	18.85	10.22	7.0	2.4	100	313	3010	3000	1.62
GTE	17.39	26.0	23.19	17.39	5.80	7.25	2.90	100	69	3014	3000	1.57
HNG	39.66	16.03	14.77	16.46	6.33	5.91	0.84	100	237	2549	2000	1.6
MKA	23.53	15.69	25.49	25.49	9.80	-	-	100	51	2824	3000	1.3
KJB	12.12	3.03	12.12	54.55	9.09	3.03	6.06	100	33	3788	4000	1.43
TOTAL	30.57	17.95	18.04	17.27	7.54	6.77	1.86	100	1181	2810	3000	1.65
N	361	212	213	204	89	80	22		1181			

4-6: MULTIPLE OWNERSHIP AND LAND COMBINATION PROCESSES:

One of the possible consequencies of increases in incomes in the rural areas is that the richer peasants may buy out their poorer neighbours. Inorder to find out whether this process is operative in Kiambu, we examined the Land Records to see whether any farms had been combined with the pieces purchased. The study showed an insignificant combination movement. Only 6% reported combinations with another land unit to form a new land units.

Table 15 below, suggests that just as the problem of fragmentation is furthest advanced in the area nearest Nairobi (see Table 3) so too, the

combination movement seems most advanced in this zone; with 15% of the land titles having been closed and combined with other certificates to create new land holdings.

Table 15 is notable also for the low degree of reported subdivisions. There is no doubt that this grossly underestimates the volume of subdivisions in the district.

TABLE 15: KIAMBU LAND TRANSACTIONS: REGISTRATION AND COMBINATION OF TITLES: (PERCENT):

SUBLOC	CERT	NO CERT	TITLE CLOSED COMBINED	TITLE CLOSED SUBDIVIDED	TITLE CL. SUB/COM	TOTAL
RUK	73.91	10.14	15.22	0.72	-	100
GIT	81.11	14.44	2.22	2.22	-	100
MUT	81.82	18.18	-	-	-	100
KAM	62.87	26.95	4.79	4.79	0.60	100
GTO	72.97	17.57	4.05	2.70	2.70	100
GTI	83.44	10.51	4.46	0.96	0.64	100
GTE	81.16	14.49	-	-	4.35	100
HNG	74.68	18.14	3.80	2.53	0.84	100
MKA	86.27	3.92	3.92	-	5.88	100
KJB	93.94	3.03	3.03	-	-	100
TOTAL	77.11	14.86	5.04	1.86	1.10	100

Nb: only 6 percent reported any combinations on the whole.
94% reported not combined with any other piece.

Reporting subdivisions, particularly of very small holdings is likely to bring down the wrath of the Land Board on the parties involved, not to mention the increased registration fees involved. The tendency is therefore not to report subdivisions. The low figures may also reflect a lag in the registration process itself, so that although many subdivisions may have occured, the Land Registry has simply not caught up with the process. The constant crowd of about 100 people per day who queued at the land office every day, is further evidence of the fact that a great deal more transactions in land had occured and were waiting formal ratification at the Land Registry.

4.7: LAND REGISTRATION & LOANS IN KIAMBU:

One of the most widely held justifications for land registration is that possession of Land Titles will enable farmers to borrow money for agricultural improvements[20] on their farms by using land as colateral, thus, increasing productivity. Our data suggests that nearly 1/5 of the Land owners

in Kiambu have had a loan. Of these, $\frac{1}{3}$ had more than 1 loan.

Most of the loans are borrowed from private sector, i.e. banks and building societies which contributed $\frac{2}{3}$ of the loans. Govt. and public agencies, i.e. the Agricultural Land Board, the Agricultural Finance Corporation and the ICDC and the District Loan Boards, have contributed only $\frac{1}{3}$ of the loans. Private Sector loans on the whole, tend to be larger than the public sector loans. Most of the loans, are however, very small; with the mean value of about sh. 1000/-. Only $\frac{1}{4}$ of the loans were above sh.10,000/-.

The volume of lending, though, was very insignificant before 1968, as Table 16 below, shows, only after this date does the mean value of the loans exceed sh.10,000/=. The value of individual loans ranged from asl little as sh. 1000/= to well over sh. 70,000/=. It is important to note the larger the loan, the less likely it is that it will have been borrowed for agricultural purposes. The larger loans tend to have been made to large businessmen mostly commercial wholesalers and distributors. What seems to happen is that those with above average land holdings (6.1 acres and above) give land as coletaral to borrow for business purposes.[21]

TABLE 16: KIAMBU LAND TRANSACTIONS: LOANS & LENDING: NUMBER OF LOANS BY YEAR.

YEAR	NUMBER OF LOANS	MEAN VALUE SH.
1960	5	2460
1961	4	1750
1962	10	1660
1963	3	1966
1964	6	7617
1965	11	6972
1966	16	9381
1967	14	5685
1968	30	5783
1969	38	11750
1970	66	16777
1971	63	13139
NA	919	-
TOTAL	1185	-
MEAN	.34	1108
SD	0.77	15.9

As Table 17 below shows, chances of not having a loan are 90% for those with less than 1 acre, and only 75% for those with above 10 acres.

Table 17: KIAMBU LAND TRANSACTIONS: LOAN VALUE BY SIZE OF HOLDING: (PERCENT)

ACREAGE VALUE IN SH.	0.1-1.0	1.1-2.0	2.1-4.0	4.1-6.0	6.1-10.0	10.1 +	TOTAL	N
0	88.6	82.4	76.8	70.5	70.6	75.4	77.6	919
100-4000	3.0	9.1	8.9	12.0	13.7	7.2	9.1	108
4000-10,000	3.8	7.0	9.7	8.9	10.2	8.7	7.9	94
10,100-200,000	2.1	1.1	2.5	3.9	3.6	4.3	2.8	33
201,000 -	2.5	0.5	2.1	4.7	2.0	4.3	2.6	31
TOTAL	20.0	15.8	20.0	21.8	16.6	5.8	100	-
N	237	187	237	258	197	69	100	1185

This is not surprising, in view of the fact that most banks would only accept holdings of substantial size (mostly 6 acres and above) as viable security for loans of about 10,000/-. It is also unlikely that those with very small holdings will be using them for cash crops, though dairying is a possibility even at 1 acre sizes. But the govt. on the whole also tends to discourage lending to people with extremely minute holdings.

5-0: CONCLUSION:

This paper has tried to analyse the nature of Land Transactions in Kiambu District since 1956. In part I, distance from Nairobi, which serves as the central market for the District, has been considered as the main explanatory variable in understanding land market processes in this zone. In particular, we have observed that land values per acre decline with distance from Nairobi, though the rate of change of such a process needs to be more critically analysed, using more advanced econometric techniques. This will be the task of a future paper based on our present data.

Secondly, we have observed that land values per acre are rising over time, though the land market was fairly dormant in the earlier periods of our analysis. Indications are that this trend of rising values in Land prices will continue in the near future. The rises are likely to be more

acute in the areas nearest to Nairobi, as competition for residential spaces spreads from the current high income sectors of Nairobi, to the middle income Kikuyu population of Nairobi.

Thirdly we have identified three possibly distinct areas of intense land activities - what we have called our 3 submarkets. These occur at approximately 10, 20 and 40 miles, though there are indications that the peaking is occuring further in land from Nairobi - suggesting an encroachment of Nairobi suburban residential patterns into the peri-urban agricultural zone.

The first submarket, is distinct from the other, and is characterised by a high proportion of above average value per acre transactions, and a preponderance of small size transactions, which suggests an advanced degree of fragmentation.

The other two submarkets are not so clearly marked, and we would have to control for cash crop productivity and soil quality to explain the observed differential activity rates at the 20, and approximately 40 mile points. One possible cause of such concentration of activity in this zone is the presence of rural industrial centres - such as Limuru and the old villages such as at Gathage and Gathangari at about 25 miles.

In part II, we have examined Land Transactions in the whole District in general, while highlighting the differences between the various submarkets. In particular we have observed the extremely inequitable distribution of the land in the whole district and the minuteness of the holdings in the formerly African areas. Nearly 60% of the holdings are under 4 acres. This degree of fragmentation is furthest advanced in the areas nearest Nairobi. We have also obseved that the smaller the piece of holding, the more likely it is to have been purchased.

The observed increase in the formalisation of transactions, suggests that land is increasingly being exchanged for money. Nearly 70% of all the landsiin the sample had been purchased. Lands which are purchased are also more likely to be sold to other owners, as opposed to lands which are inherited. The surprising thing about land transactions, given the high degree of monetisation, is the persistence of traditional non-monetary forms of transactions - namely gifts of land. The persistance of such gifts is likely to ameliorate the consequences of landlessness, though how long this custom will persist, is difficult to say.

Our data suggests that the movement towards combinations of land by purchase is not very prevalent in the whole district, though it is significant in the first submarket. It is also impossible to assess the extent of

multiple ownership of land in the District from the land files at the Land Registry, since our study focused on the farm unit, rather than the owner. Our impressions are, however, that multiple ownership of land is quite extensive, but a different study would be needed to evaluate this.

Finally, we have observed that Land registration has served one of its aims of enabling farmers and land owners to use Land Titles as Security while borrowing from both the public and private sector. The extent of such lending, however, still remains small, and concentrated only amongst those with large holdings. Moreover, it is not clear that all the money borrowed is used for agricultural purposes. Instead, it is suggested that the larger loans are used for business purposes, though, ultimately the businessman may invest in a larger and more prestigious land holding, either in the former settled areas, or in the Rift-Valley.

Our study suggests the need for studies to evaluate the effect of land processes in the first submarket, (i.e. Ruaka and Gitaru areas) on agricultural output, and the problems of the so called villages in the 15 mile perimeter in their role as domitories for comuters to Nairobi metropolitan labour market. Such studies should help the agricultural planners most usefully develop intensive crop methods suited to small holdings in the peri-urban zone - such as fruits, flowers and horticulture in general. It should also aid the town planners in their evaluation of long term growth strategies for Nairobi.

Further, a study of the new land buyers is called for, inorder to assess more positively the social changes which land transactions may be developing in the rural areas. A study of the latest movements into the settlement schemes, and the Farming Co-operatives in the Rift-Valley, would also illuminate the structure of current land processes; particularly their aeffect on land values.

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FOOTNOTES

1.- See Carter Commission, 1931 and other Post Independence Govt. Missions.

2 - For a history of this Reform, see M.P.K. Sorrenson, Land Reform in Kikuyu Country, and the Swynerton Plan - 1954.

3 - Kenya, Dev. Plan. 1970/74 - P. 210

4 - Kisii rather than the more densely populated areas of western Province provides a better counter against Kiambu because of its relatively advanced agricultural cash economy. Demographically, the two districts are very similar. Both are very densely and evenly populated, with the exception of the former scheduled areas in Kiambu District. See Kenya Population Census, 1969, Vol. 1 pp. 3-5, and 39-41.

5 - See Colin Leys, 'Politics in Kenya' The Development of Peasant Society. IDS Discussion Paper No. 102.

6 - The study was undertaken at the Institute for Development Studies in the University of Nairobi, from Dec. 1970 - Aug. 1971. The study is in the process of being written. The study's findings were essentially similar to the Ascroft study of Innovation in Tetu, which have been published in a series of papers at the IDS notably the paper to the conference on strategies for Improving Rural Welfare, May - June 1971, and IDS Occasional Paper No. 4.. The most progressive and the Laggards in the two areas were similar in socio-economic characteristics, with the exception that the most progressive farmers in Banana Hill were much more affluent, and the Laggards relatively worse off. Thus the degree of rural differentiation seems most acute in Kiambu compared to other parts of Central Province. For earlier impressions on the nature of innovation process in the Banana Hill area, see my paper to the Conference on Strategies for improving Rural Welfare - Thresholds in the Transformation of a Rural Economy; by J. Gatanyu Karuga, IDS, Occasional Paper No. 4.

7 - Von Thunen 'Der Isolierte Staat' (Hamburg, 1826). Quoted in Walter Isard - Location and Space Economy' below.

8 - Notable writers in this field include R.M. Haig, with his classic paper 'Toward an Understanding of the Metropolis' QJE 1926. Haig is remembered for his concept of 'the friction of space', and the notion of a trade off between increased transport costs occasioned by locating further away from the market, and increased rentals for locating near the market.

Other writers include: E.S. Dunn, 'The Location of Agricultural Production'.
Walter Isard 'Location and Space Economy' M.I.T. Press, 1956.
William Alonso 'Location and Land Use' Harvard University Press, Cambridge, Mass. 1965.

Our analysis draws heavily on Alonso's classic paper - 'A Reformulation of Classical Location Theory and its Relation to Rent Theory' in Karaska, Gerald, J and Bramhall, David F (Ed) 'Locational Analysis for Manufacturing' - A Selection of Readings. M.I.T. Press, Cambridge. Mass., 1969.

9 - For our analysis, reference to such a centre may be interpreted to mean Nairobi, unless otherwise stated.

10 - Alonso, W. op. cit.

11 - Kenya, Pop. Census, 1969, P.4

12.- see Haig, R.M., op. cit.

13 - Generally, land located near main roads will tend to be more expensive than land inaccessibly located, even though this latter piece may be nearer Nairobi than the former. One of the draw backs of our approach is that it assumes that all land is equally accessible at any one distance - which is clearly not the case given the topography of Kikuyu Country.

14 - For a long time, Bata Shoe Factory at Limuru has provided a lot of jobs and opportunities for marginal or casual occupations such as hawking and repairs of furniture, shoes etc. In short, Bata Shoe Factory is the mainstay of the Limuru Economy. More recently however, other factories have been established in 'rural' areas, along the Nairobi/Banana Hill/Limuru Rd. The Kiambaa Wool Factory and Kiambaa Luggage Manufacturers situated at approximately 12 miles from Nairobi are cases in point. These factories have altered the economy of the local area in as yet an assessed way. My impressions are that they have increased land values as they bid for residential land to house their employees; and have also stemmed the outmigration of Kiambaa residents to Nairobi. The result is that land on either side of the road for as much as 6 miles is rapidly being converted to long, wooden barrack type rooms for renting to the employees at these factories. Another side effect of this process is that the significance of coffee in this area is dwindling as more and more people convert their land to houses for rent and market gardening.

15 - See Central Province, Physical Regional Plan, Appendix II, Govt. Printer, Nairobi, 1971,

16 - Nearly a quarter of the Land units did not show the date when the Certificate of title was issued. This title is essential before the - Land Office can approve a transaction. This high degree of non-reporting farms a good estimator of the extent of probable unregistered transactions. This is dealt with in more details in Part Two, in the section on Registration of Land.

17 – These are impressions from personal interviews with about 15 African farmers at Riara Ridge – an exotic area of European Settlement between Kiambaa Location and Limuru Town – during the period of Nov 1970 – Feb 1971. The subdivisions are on a very informal basis, since the AFC (Agricultural Finance Corporation) which administers the Loan does not approve of such subdivisions.

18 – These impressions are based on personal observations of the farmers in Kiambaa Location during my field link on the Banana Hill Innovation Study and extensive travel in the southern part of Kiambu District.

19 – For an excellent discussion of Gikuyu Land Tenure,
see Jomo Kenyatta 'Facing Mount Kenya',
Secker and warburg, London, 1938, Chapter II.

20 – See Kenya Dev. Plan, 1970/74, op. cit.

21 – This relationship between Land and Business was also observed in the study of African Businessmen by Peter Marris – and A. Somerset, 'African Businessmen', Routledge & Kegan Paul, London, 1971. The Successful businessman wants to buy land, as an ultimate form of security. Meanwhile, the large land holders benefit from their land because they can borrow for business purposes, using their land holding as security. Commitment to land, however, still remains the surest form of investment. Even to the current incipient bourgeoisie, land holding still retains a traditional almost mystical hold on their investment patterns, quite apart from the fact that land ownership in the previously European owned areas is the latest form of status flaunting.