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(832)
RESERVE

**MARKET INTEGRATION IN ELGEYO MARAKWET AND WEST POKOT ;
COMPARING HOUSEHOLDS AND LOCATIONS.**

By

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WORKING PAPER No. 392

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JUNE 1982

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MARKET INTEGRATION IN ELGEYO MARAKWET AND WEST POKOT:
COMPARING HOUSEHOLDS AND LOCATIONS.

ABSTRACT

Within Kenya, Elgeyo Marakwet and West Pokot are two peripheral districts. Recently they are experiencing rapid changes and most probably they are heading towards a radical transformation in the 1980's. Not only in the high potential parts, but also in the semi-arid areas of the Kerio Valley. The keyword for the processes of change is 'market integration'. Wage labour employment and local off-farm income are no longer of minor importance only. Agriculture and livestock production are commercializing. Land is enclosed and a land market is developing. Farm inputs are bought and many consumer goods and services are no longer only produced by the households themselves. External change agencies play a crucial role in these developments, especially government development projects seem to be important.

This paper presents a joint research proposal about the regional and social differentiation of these processes of market integration. On a low level of scale, comparing 27 locations within the two districts, a historical study will be carried out about the relationship between the location of development efforts and the extent and kind of market integration. Within a number of 'typical' locations, households will be studied to find out the variation in market integration between them and the changes in tasks and in access to resources, income and decisions within the households.

Ton Dietz and Annemieke van Haastrecht.

1. INTRODUCTION

Ton Dietz and Annemieke van Haastrecht

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1. INTRODUCTION

In this working paper we introduce our two research themes, the theoretical literature that inspired us, our methodology and a provisional description of our two research districts: Elgeyo Marskwet and West Pokot.

We will focus our research on the process of market integration.

Market integration can be broken down into four subconcepts:

the integration in the wage labour market, in the market for agricultural (and other) products, in the market for means of production and in the market for consumer goods and services. Basically it is a process of structural change of the economy from an orientation towards the household (or local) subsistence to an orientation towards the national or even international market economy. For the four processes of market integration other - related - concepts are used in the literature too: reap. (partial) proletarianization, commercialization, technical modernization and socialization of consumer needs. This process is accompanied by the development of various outside links; of a network of flows of goods and people.

Within this general process of market integration we are interested in two main elements:

1. The influence of outside penetrating agencies on the extent and kind of regional differentiation in market integration.
2. The effects of the various processes of market integration - and especially of agricultural commercialization and (male) labour outmigration - upon the extent and kind of social differentiation.

Within the first research element we will be especially interested in the influence of the state, but also private firms, private traders and missions will be analysed. Its influence will be analysed on the level of locations and sublocations, breaking down government (and other) activities to this spatial level and linking them with the various processes of market integration also analysed at this spatial level.

Linking the data spatially and analysing the findings historically (through time sequences and time lags) can give us material for formulating and testing detailed hypotheses about the relationship between 'policy' and 'development'.

The second research element will be analysed on the level of households within a number of 'typical' locations. Here differentiation between households is one process and changes within households another.

The differentiation between households will be analysed in activity terms and in income terms; the changes within households in terms of control of labourtime, means of production and product, in burden of work and tasks within the household and in income terms.

Market integration is mostly studied in core areas of rapid small farmer development and/or in areas with a long and continuous history of labour outmigration. In Kenya for instance most research has been done in Central Province, Machakos-, Meru-, Embu- and Kisii-Districts and in Western Province.

We would like to concentrate our research on more peripheral districts, with ecologically more diverse zones (also comprising semi-arid areas), where not only crops are produced by a settled population but also livestock products by semi-nomadic pastoralists and agro-pastoralists, where recently rapid changes are taking place and where more drastic changes are to be expected.

West Pokot and Elgeyo Marakwet are chosen as research districts.

All those characteristics can be found there. They are both long neglected by government and other institutions, spatially peripheral to the main 'booming rural areas' in Kenya, both having more than half of its area and more than one quarter of its population in semi-arid areas where livestock is a basic means of subsistence and both districts are experiencing rapid changes recently.

Our results can be directly useful for development planning purposes in those two districts, another reason for concentrating our efforts there. Government attention is suddenly increasing rapidly. The

Kerio Valley Development Authority (see KVDA 1980 and 1981, Were 1981), the Integrated Agricultural Development Programme and the Arid and Semi-Arid Lands Development Branch of the Ministry of Economic Planning (see ASAL 1980) all try to get a firm grip on the developments taking place and all try to kick the districts over the 'threshold of radical transformation' (in the words of Ssenyonga, 1980). Our research will especially be linked to the activities of the programme coordinator of ASAL in the two districts. Our results will be used in the ASAL Development Framework and in a 'District Development Atlas' for the two districts. ¹⁾

1) The research period is one year, in 1982 and 1983. The research is financed by the Dutch Ministry of Development Cooperation - who will also finance part of the ASAL expenses in the area - and by the University of Amsterdam, Dept. of Human Geography.

2. THEORETICAL FRAMEWORK: A REVIEW OF LITERATURE

a) THE CONCEPT OF MARKET INTEGRATION

The concept of 'integration' has very diverse meanings. In development planning there is much emphasis on 'regional or rural integrated development'. According to the Kerio Valley Development Authority in their 'General Development Plan for the Kerio Valley' (KVDA, 1981, pp. 54-57) development integration at least has four meanings:

- i. Integration between plan proposals and existing activities going on in the area;
- ii. Integration within plans, between investments in direct production activities and in public infrastructure and services;
- iii. To ensure that investments in key activities has region-wide implications (a 'growth centre' approach);
- iv. The integration of the plan-area with adjacent regions and with the national economy as a whole (we could add: the international economy).

Integration is mainly defined here as an organizational and economic-geographical strategy.

In the social and economic sciences the concept is used in a more diverse way even and to avoid confusion it is useful to distinguish them.

In human geography the concept of integration bears a very spatial load: the growth of contacts between spatially separated parts of a certain area through the growth of the movement of goods and people and through the growth of communications. The process of spatial integration is facilitated by a better infrastructure and by a better regional structure of central places forming a hierarchy of economic functions. Beside this tradition in human geography, with an economic emphasis, there also exists a more social-political tradition in which integration is mainly defined as 'national integration', combining notions about the growth of political penetration from a central state and the growth of sociocultural unity of people living in ever larger areas (e.g. see Heinemeyer, 1968). Both traditions derive many of

their ideas about development from the modernization approach in the 1950s. Slater, one of the geographers who are very critical about this approach, rightly says that spatial integration can as well mean spatial disintegration of former regional structures of relationships and also social disintegration (Slater, 1973, pp. 28-30).

In countries like Kenya four important processes of integration are combined during the last century:

- the integration of the economy of the various parts of the country in the world capitalist economy and in the national economy (and partly the disintegration of existing spatial economic networks). We will deal with this process more in depth.
- the linking up of places through better material and communicative infrastructure and the development of a hierarchy of central places (e.g. see Soja 1968, Obudho and Taylor 1979 and Henkel 1979).
- the integration of the political system of the various parts of Kenya first in a colonial political system and later in a national political system, with a partial social disintegration of existing power structures (e.g. see Cliffe, Coleman and Doornbos, 1977).
- the integration of the various local forms of cultural and social organization of life towards a lifestyle very much influenced by Western patterns and the partial disintegration of precolonial cultures.

Our research will focus on economic integration but of course we should be aware of the conceptual and empirical links between economic integration and the other processes of integration. Within economic integration we will not confine ourselves to the spatial processes of economic-geographical integration. We want to deal with the broad processes of market integration, including its spatial aspects.

As stated in the introduction of this paper we distinguish four kinds of market integration.

1. The integration in the wage labour market. Spatially the processes of labour migration are important here.

- ii. The integration in the market for agricultural (and other) products. Spatially the direction of the flow of goods is relevant here and the development of a network of buying, processing and consumption centres.
- iii. The integration in and the development of a market of means of production, as buyers of land, machinery and inputs.
- iv. The integration in the market for consumer goods and services. Spatially for iii. and iv. the development of a hierarchy of service centres is relevant.

We will give a broad overview of the research problems and findings that arise from the relevant literature, especially about Kenya.

i. Labour market integration

When workers are no longer confined to their own household-, family- or clan units of production and instead are selling their labour power to others for a wage, we speak about labour market integration. Related concepts here are 'capitalist transformation' (e.g. Carlsen, 1980) and 'proletarianization' (e.g. Kitching, 1977).

But we have to be very careful with these concepts. Of course there is clear evidence that growing numbers of people are working for a wage in Kenya. We estimate that nowadays some 1 million Kenyans are working as full time wage labourers in the public sector, in urban private enterprises and in rural large scale enterprises, while there were only 650.000 ten years ago (Employment and Earnings in the modern sector, 1981). Another 200.000 labourers work full time at small farms while there are at least 140.000 seasonal and casual workers there too (Kitching, 1977). Many workers in the urban and rural 'informal sector' (estimated at 165.000) are in fact wagelabourers too. From detailed studies done by Cowen and Kinyanjui (1977), Lamb (1977), O'Keefe and Wiener (1977), Carlsen (1980) on the rural areas and by Kabagambe c.s. (1977) on the informal sector it becomes clear that all these numbers are growing. More than 25% of all grown up Kenyans must have some form of wage income, more than 80% of these being men. But most wagelabourers still have

their own piece of land, and many times also their parents, wife and children, in the rural areas where they come from. Proletarianization in the Kenyan case is not in the first place a process in which the property of the means of production (land, cattle) is lost and workers are becoming 'free of the means of production' and therefore compelled to sell their labourpower to others. Proletarianization is partial and still consists for an important part of male labour migrants coming from the rural areas. Many households in the towns and in the rural areas show the picture of participation in several modes of production: partly producing use values for satisfying their own needs, partly trading their own produce or selling goods bought from others, partly selling products to marketing boards and/or private traders, and partly working as full time, seasonal and/or casual labourers within the district but more often outside the district.

To study the extent and impact of wage labour integration it is not enough to know how many members of a location or household are working as wage labourers. We should know how much they earn and how much is remitted to the location or the household. Also we should know how regular those remittances are and how the time budget of the wage-labourers looks: are they working the whole year full time as wage-labourers? How much time do they spend economically within the household and when? From the side of the productive households we should have to know if they use casual or even full time wage-labourers and how much labour time is spent by them compared to family-labour. Various people deal with these complex problems, e.g. Kongstad and Mønsted (1980), Carlsen (1980) and Wisner (1978).

Another research problem here is the concept of wage. Many times the wage not only consists of money, but also of housing, some food and services.

In more traditional arrangements, as can be found many times in pastoral and agro-pastoral societies, labour power is provided without any money as return: some consumption goods are given or the right to use (part of) the product (milk as 'wage' for herding someone else's cows) or the right to use or own cattle or land or a daughter in the future.

Part of these forms of labour payment are well established in the traditional society. We should be aware of the growth of this kind of labour engagements as a disguised kind of wage-labour employment (e.g. see Bates and Conaet, 1981).

ii. Product market integration

Here we will deal with agricultural market integration or commercialization.

The Dutch geographers Hinderink and Sterkenburg (e.g. 1980) analysed the abundant literature on (African) commercialization and they point towards several main problems involved in that literature.

The first problem is: what exactly are commercial products? Sometimes these products are defined as the products that cannot be consumed within the household because they need further industrial treatment before they can be consumed. But measured in that way we neglect all the products that are partly consumed by the producing household and partly sold. Many times the scale of the production - consumption chain is used, differentiating between:

- a) products consumed outside the country and sold at the world market or in neighbouring countries;
- b) products consumed within the country, but outside the administrative boundaries of the province or district where they are produced;
- c) products consumed inside the administrative boundaries of a province or district but outside the producing local village community (although this poses the question what exactly a 'village' is);
- d) products consumed inside the local village community, but outside the household in which the product is produced (although this poses the question what exactly that 'household' is);
- e) products produced and consumed within one household (the real production for autoconsumption).

In most geographical and economic research only the a- and b-scales are used as units of measurements for commercial production.

For Kenya the research by Casley and Marchant (1979) clearly demonstrates that in that case commercial production is highly underestimated compared to the situation where 'commercial' means production for consumption outside the household. The problem however is that official data are - in a rather rough and not very reliable form - only available for the exchanges between districts and divisions (e.g. District and Divisional Agricultural Reports). For historical reconstruction of the process of commercialization at a lower level of scale it seems to be the only possibility to use data of the district and divisional scale to 'map' the information on various products as detailed as possible.

For a number of products however, for which no official marketing boards operate, data are even lacking at the inter-district level. To find the actual situation of commercial production and its breakdown over the various scales, very detailed research is necessary within the households and within the various markets, shops and marketing organizations. It is not enough to know who is buying the goods or services and where he or she is living, but one also needs to know who is actually consuming the product or using the service and where.

Using 'production for use outside the household' as the best definition of commercial production a second problem arises. As Casley and Merchant (1979) illustrate, many peasants who are selfsufficient on balance do sell their crop after harvest because of lack of storage capacity and buy the same product back afterwards (often at far higher prices).

It seems useful to identify at least four types of commercial production:

- a) products which are explicitly produced for sale (either because they cannot be consumed within the household or because they form a real surplus);
- b) products which are sold because they are real surpluses, but which were not explicitly produced for that purpose;
- c) products which are sold because of lack of storage capacity (or because of other reasons) but which would have been necessary for the household needs;
- d) difficult to valuate are products which are given away or received within the family or clan, or which are 'paid' or received as dowry, or as fine or as social gift within a status hierarchy.

It could be useful to take these products apart too.

Still there is a third problem. To differentiate between market oriented production and production for autoconsumption one needs to have a yardstick to find out the relative importance of both.

'Income received in terms of goods or money' is no longer possible as a variable, since products which are consumed within the producing household are not sold. The usual method is to estimate the volume of produce which is consumed within the household and to value this according to market prices.

For many products this is very difficult: it is difficult to measure the volume of produce eaten before the actual end of the harvest (e.g. eating maize from the field); also various prices exist within the country and during the year, so what price must be used? What to do if no local selling exists and no equivalent local market price can be used (e.g. for cassava or some vegetables)? For the services the problems are even more serious: e.g. how to value education within the household in comparison with formal education?

Although much more difficult even, theoretically we prefer to use the percentage of land used for various agricultural products and the percentage of labour time for all goods and services. The first method would force us to measure exactly what acreage is used for all different products during the year. The second method would compel us to measure the hour to hour activities during the year of all the members of a household of all households in a study-area. In practice this seems to be rather impossible.

At the best we can use some indications on labourtime devoted to products and animals, as studied by some agricultural specialists (e.g. the Farm Management Section of the Kenyan Ministry of Agriculture, 1979, for a case study on Kisii and the CBS Integrated Rural Survey (1977) and by some micro economists and anthropologists studying the production by women in Kenya. (See part 2.d. of this paper.)

Also we could check some of the information given on acreage by random measurement ourselves.

iii. The integration within the market for means of production

Here two processes seem to be relevant: the development of a land market and the technical modernization of agricultural production through bought inputs and tools.

Originally land was owned by clans and could be used by households when they had the consent of the clan elders. Individual ownership of land hardly existed in Kenya before the 20th century and this situation was 'frozen' in the so-called 'African Reserves' during most of the colonial period. After 1955 however a fast individualization of landownership developed, first in Central Province and later on everywhere in the agricultural parts of Kenya. This process was accompanied by an enclosure movement and legalised by land adjudication. Land could be used as individual mortgage to acquire credit and land could be sold and bought individually. Njeru (1978) gives a vivid account of the effects of these processes in Mbere/Embu, Carlsen (1980) tries to find empirical evidence on the existence of a land market in parts of Kisumu-, Kisii-, Taita- and Kwale-Districts (esp. pp. 142 ff). Anyang' Nyong'o (1981) tries to relate this issue to the development of a 'middle peasantry' in Nyanza Province, and Gutto looks into the legal side of it (Gutto, 1981).

Also here many methodological problems are evident. Where exactly does the right to use land in exchange for a few goats change into a right of ownership bought for money? How to evaluate the formal ownership of an absent owner or group of owners if in fact other people are the actual owners despite missing a paper proof?

In part of our research area there is not only this problem of land ownership in transition but also the problem of cattle ownership.

In pastoral societies cattle ownership is shared although the right of usufruct is individualized. Cattle sales do need the consent of various people, sometimes spread over the whole area. Having herds does not always mean that the herder 'owns' all or part of the animals.

Various systems of herd dispersal exist with hired shepherds, shepherding contracts, labour exchange and herd pooling (see Bates and Conant 1981,

Goldschmidt 1981). Connected with this issue is the 'ownership' of waterpoints and of 'wasteland' or dry season pasture. It is clear that changes are occurring towards ownership of cattle, water and pasture that are more individual or more restricted to certain groups of households (many examples are given in Galaty c.s. 1981).

Technical modernization of farm inputs and tools is developing quickly too. In the agricultural area especially the use of new seeds (e.g. hybrid maize, see Gerhart, 1975), some fertilizer and chemicals and fencing materials introduced the necessity to buy items that were either non-existent before or were locally provided (most of the times by members of the household themselves). In her various studies Heyer (e.g. 1974 and - together with others - 1976) tackles this process extensively while also Garfield (1979) deals with it. The buying or hiring of tractors, cultivators, ploughs etc. by a minority of small farmers is another part of this process.

Also the pastoral societies are changing in this respect. Veterinary medicine is provided from outside. Waterboreholes are created by external agencies. Artificial insemination is introduced. Chemical dips are created and part of the grazing area is fenced. Although not always money is involved from the pastoralists themselves (part is provided free) the provision of these goods and services clearly is part of a process of market integration. (See Migot-Adholla and Little 1981 and Little 1981).

iv. The integration in the market for consumer goods and services

In many rural households most of the food consumed, of the building materials for the house and the yard, of the water used and of the energy provided are produced within the household. Formerly also most of the clothing was homemade as well as household utensils. Education was within the clan and the household and there were specialized local doctors using local herbs and roots and local diviners communicating with the supernatural.

The supernatural being the first part of life being penetrated from outside, mostly combined with educational and health care activities of missions, other intrusions into the self-supporting communities followed. Food habits are gradually changing, part of the foodstuffs being bought now in the markets and the shops. In drought prone areas even the basic food has to be provided from outside in some years through food aid (see Akong'a, 1982, on Kitui). Missionary and state activity changed the culture of clothing too, most new clothes to be bought now. Housing standards for the 'progressive farmers' changed towards corrugated iron roofs, stones and cement. In some areas the provision of water is organized through government sponsored pipes and even wood and charcoal are no longer the only source of energy. Through the market integration of consumer goods and services many rural areas are connected firmly with the outside world now. Private traders settle, market and service centres develop, sometimes replacing traditional institutions, sometimes being additional to them. We will especially be interested in the regional system developing and try to get some indications of the flow of goods involved. A number of central place studies done in Kenya and elsewhere can guide us: in the reader by Obudho and Taylor (1979) and in the analyses by Obudho and Waller (1976) various examples can be found. The studies by Henkel (1980) on a.o. West Pokot and by Oswald (1980) on Baringo are most relevant to us.

b) REGIONAL DIFFERENCES AND REGIONAL POLARIZATION

i. The description of regional differences

One of the unsolved dilemma's in development economics is the equilibrium - polarity dichotomy of regional (and social) development. The well known polarization thesis of Myrdal (1957) followed by a range of similar centre-periphery-formulations stand against the equilibrium thesis of Williamson (1965) and others, who claim that after a period of polarization of economic growth a period of diminishing differences will follow. To test claims like these, many operational problems have to be solved, so it is not surprising that hardly any research has been devoted to this kind of long term diachronical analysis of regional differentiation. Most research done on regional differences is static and synchronical as far as statistical testing is concerned. The historical parts in books about regional inequality (e.g. Soja 1968 or Bigsten 1980 on Kenya) are mainly giving broad overviews with no systematic historical analysis of certain variables - or only for very short timespans, e.g. 1967-76 as in Bigsten.

Several problems arise:

1. The problem of scale: almost every empirical study known uses administrative areas for which data could be found. Many times the level of analysis is too high and the internal differences within the units chosen are too large. Bigsten for instance uses Kenyan provinces as the level of analysis for the economic and social variables chosen. At least for two provinces (Rift Valley and Eastern) this unit of analysis is rather inadequate.
2. The problem of the variables chosen: the availability of data, produced by statistical bureaus, makes it attractive to use these data. These statistics still reflect the modernization approach of development problems, stressing the importance of income per capita (and hence all activities producing money income as opposed to subsistence activities), of transport networks, communication and information (roads, telephone, newspaper circulation), of urbanization,

of education, of participation in 'non-parochial forms of organization and activity', of geographical mobility (e.g. in Soja 1968, Taylor 1979, p. 10-11 and in Nyangira 1975).

Degree and kind of market integration is used only implicitly in most studies, in fact only pointing at the infrastructural side of it. Only in Soja's study a number of integration variables have been used, most of them bearing the stamp of the modernization approach of the 1950's and 1960's, an approach, however, clearly abandoned by Soja in his recent work (see Soja 1979).

In the 1970's there were a number of attempts to change this style of regionalization and to find new ways to select variables for regional differentiation. A major cause for this change was the criticism on the modernization-paradigm in theory and on the spatial and social selectivity in development strategies. As alternatives 'centre-periphery-', 'dependency-' and 'peripheral capitalism-' approaches were formulated. In most of the new regionalization attempts the differential integration of regions within the capitalist market economy is suggested as a central variable.

For Africa, Hinderink and Sterkenburg (1980) give a useful overview, in which especially the works of Amin (e.g. 1973) are given as examples of macro-regionalization, based on the function of regions within the (capitalist) world in colonial times. This is further specified in the works of e.g. Wallerstein (1976), Cliffe (1976, 1977) and Slater (1975). The regional typologies given differentiate between zones that do and zones that do not produce for the exogenous or world market and/or for the national market. The commercial zones are further distinguished according to their mode of (commercial) production, looking specifically at the relations of production. The non-commercial zones are distinguished according to degree of labour migration to the 'core'-areas. However most studies until now are rather sketchy, and seem to prefer verbal statements above empirical testing. Also the scale of analysis is too high. We do not know any regionalization studies on Kenya working from

this perspective, but three regional studies were very inspiring: the work on Machakos by Forbes Munro (1975) the ones on Kitui by Mutiso (1977) and the one on Tharaka/Meru by Wisner (1978). On a more general level (and lacking systematic regionalization) the works by Van Zwannenberg (especially 1975, together with King) are stimulating.

We tried to make a regionalization of Kenyan districts using market integration as a central variable (Dietz & Koninx 1982). Also we tried to compare the results with Tanzania (Dietz & Van Geuns 1982) while Schellenberger (1981) did it for Kitui-District, comparing locations.

Our own preliminary results of the analysis of statistics and literature on regional differences of market integration in Kenya and on the regional unequal development does not go much further yet as to describe the pattern. But still, as far as we know, that description does not exist yet. Although this Kenya-wide level of analysis will not be the level of the proposed survey, the work on Kenyan regionalization was an important starting point for us. Our critique on the inadequate scale of analysis in most studies and our critique on studies using variables that we think are less relevant and on much 'loose talk' in studies where we think the variables are relevant brought us to a research proposal using a low spatial level (comparing locations) and to a methodology that we try to present as thorough and consistent as possible, around the variable 'market integration'.

ii. The explanation of regional differentiation

To explain regional differentiation of market integration between (administrative) regions at least four types of explaining variables can be found in the literature:

- differences in ecology, population and socio-cultural organization.

The last point can be found in the literature especially as the differences in socio-cultural or socio-economic situations between regions just before colonial penetration (ca. 1900 for Kenya, e.g. see Ogot 1976).

- The growth of labour migration was directly connected with tax policy
- the different external activities which promote or prevent integration and which give or withhold the region certain functions (like export producer, food producer, producer of labourmigrants) to a certain degree.
- Here especially the role of the state (colonial and postcolonial) needs careful examination.
- the differential activities of local people and their organizations, which promote or prevent integration, (e.g. Harambee in Kenya)
 - differences in kind and quantity of the flow of wealth to and from the region (which could be called 'surplus-' or 'deficit-' integration).

In the literature on regional differentiation many writers say that in developing countries external change agencies do most to influence the existing patterns of regional differences. Especially in the more peripheral parts of the third world countries the most important change agent is the state, besides missions/church organizations. For instance Ominde (1979, p. 49) states that (in countries like Kenya): 'apart from the physical geography, regional disparities are primarily a result of the cumulative effect of various policies of development'. In the following pages we will try to review the literature on Kenya about the influences of external change agencies on regional differentiation.

Agricultural market integration can be stimulated by the extension of Government activities are spatially selective in their location and in their reach. Various development efforts also have a different effect on differentiation of market integration. The growth of local wage labour, to begin with, is directly connected with the growth of the government apparatus in certain areas, since - in peripheral areas - most of the wagelabourers will be civil servants. Indirectly wage labour is connected with government policy through large scale development projects, involving private firms (especially road building, mining). Also smaller government projects do involve wage-labour, mainly of a casual type as in the case of the small scale irrigation projects or the rural access roads programme.

The growth of labour migration was directly connected with tax policy and labour recruitment policy in colonial times, together with a policy of concentrating people in 'African Reserves', with enlarged population pressure and a policy to restrict commercial outlets (e.g. see Stichter, 1975, on Kenya and African Perspectives, 1978 on various countries in Africa). But there were large differences in the effectiveness of these four types of policy, in some areas government power to impose these policies was even non-existent.

More indirectly labour migration was created through the growth of demand for goods that had to be purchased (private traders and missions did most to stimulate this). Both information on consumer goods and local possibilities to obtain these differed widely between areas. Also better health care can create growing population pressure and hence labour migration if no other possibilities exist. Education (at least the formal primary and secondary schooling; see Hopkraft 1974) creates an attitude against rural living and enables schoolleavers to participate in certain segments of the urban labour markets, thus creating labour migrants, or even permanent urban labourers. Both health services and education were spread highly unequal through the Kenyan countryside (see Meck 1971, Mwaniki 1973, Colebath 1974, Bigsten 1980).

Agricultural market integration can be stimulated by the extension of the market formed by government employees, especially around district headquarters. It can also be stimulated by taxation policy (see Cherd 1970 for Kenya; Palmer and Parsons 1977 for Eastern and Southern Africa), by extension services (see Leonard a.o. 1977), by marketing boards and cooperatives (see Steenwinkel 1979), by the introduction of better seeds (see Gerhart 1975 on hybrid maize), by land adjudication and a government credit system for peasants (see Njeru 1978), by farmers training and agricultural/rural education efforts (see Hopkraft 1974) and by better rural roads towards the markets (see Birdsall 1978). All these government efforts to stimulate production and commercialization in agriculture were spread highly unequal regionally: some areas more and earlier, other areas less and later or not at all.

Most studies referred to, do give some impression of this regional inequality of government attention, although most are not very systematic (we should make an exception for Steenwinkel and Gerhart). Market integration can be stimulated more indirectly by health care and general education: adding to a better physical and intellectual capacity to produce a surplus.

Finally we must say that government policy can also hamper production and/or market integration: by a restricting policy (see Lamb, 1977, on Murang'a coffee restriction) by a negative price policy, or by defending monopoly situations of private traders (see Steenwinkel, 1979, on Western Province) and by bad maintenance of rural roads etc.

Livestock market integration can be stimulated through taxation or a destocking policy (see for instance Forbes Munro 1975 on Machakos), through the provision of credit to buy grade cattle or cross breeds or for fencing, through the stimulation of milk cooperatives, slaughterhouses and small scale tanneries, through veterinary services and animal husbandry courses, through boreholes, dams, cattle dips and stock routes etc. (see Hopkraft 1981, Livingstone 1975, Migot Adholla and Little 1980 and Dietz 1981 for a summary). Livestock commercialization can also be hampered effectively however (and with longlasting effects) by cattle quarantine measures etc. (see Van Zwanenberg 1975 a.o.).

Finally the purchase of agricultural inputs and means of production is especially influenced by the extension services of the government and by the existence of credit facilities.

In the abundant literature on Kenya about these relationships between state activities and market integration, it is said again and again that government policy was highly favourable for the 'Highlands' producing cash crops and for those parts of the Rift Valley where ranches were located. In colonial times these were the 'White (settler) Highlands'. The planned function of the African Reserves was that of labour supply area; commercial production had to be hampered there. The 'betterment activities', formulated in the 1930's and again during 'ALDEV' (1946-1962) when land degradation and political opposition asked for government action, partly forced the commercialization of

livestock through destocking campaigns and mainly improved the quality of the land (for improved self-sufficiency) and of the labourforce (for improved participation in the labourmarket). Only after the 'Swynnerton Plan' of 1955 the restrictions on commercial production were reduced (see Lays 1975 and many others). Many government services afterwards were concentrated in the 'enlarged centre' (Wiener 1978, p. 22), now also enclosing Central Province, and parts of Eastern Province.

Within the more fertile ex-Reserve areas of Kenya there was a clear economic polarization between Central Kenya (Central Province, Embu, Meru, North Machakos) and Western Kenya (Heyar 1974 for detailed figures). Within Central Kenya however government policy was especially located in coffee and tea areas, relatively neglecting areas in between (e.g. O'Keefe, Wiener and Baird 1977 for Gekere in Kiambu) and outside the coffee and tea belts (e.g. Hunt 1977 for Mbera/Embu, Wiener 1978 for Tharaka/Meru and Medical Research Centre 1979 for Eastern Machakos).

Within Western Kenya overpopulated areas with hardly any commercial peasants were also neglected; government initiatives on cooperatives, extension, veterinary services, depots of marketing boards etc. were concentrated in areas where some commercialization existed already (especially Kisii; see Carleen 1980), where irrigation potential could be developed with external aid (Kano-Plains in Kisumu and Yala Swamps in Siaya) or in areas with a low population pressure, relatively large areas of wasteland and a relatively high chance of success with a minority of larger 'progressive farmers' (see Steenwinkel 1979).

Most literature deals with the situation before ca. 1977. After that year the Kenyan government, with the assistance of various donor organizations, gave more attention to the 'marginal lands'. It is very interesting to study the effects of this policy on the pattern of regional inequality within Kenya.

Most of the ecologically marginal lands were also very marginal in government attention. Our research districts are partly semi-arid marginal lands so we can look into the problem in a detailed way.

c) THE EFFECTS OF MARKET INTEGRATION ON HOUSEHOLD DIFFERENTIATION

If we put emphasis only on regional differentiation between locations we are trapped in the dangerous 'ecological fallacies', in which 'mean household characteristics' are formulated using regional characteristics. A certain level of integration of a location can hide completely different situations of household differentiation within that location (e.g. a mean household level of 1000 KShs. sales of agricultural produce can represent a situation where all peasant households produce for the market and spend a considerable part of their land and labourtime on these commercial products. But it can also represent a situation in which only one large scale farm is producing all the commercial output and where the peasants are completely non-commercial).

The situation of household differences

For all the integration characteristics studied we should be aware of situations of household differences. First it is useful to know the number of households participating in various integration processes at a certain moment. For a location it is a completely different situation if there is general integration (more than 90% of all households participating), majority integration (50-90%), minority integration (10-50%) or exceptional integration (less than 10%). Second it is important to know if the same households are participating in the various processes of integration or not.

For instance there is evidence that integration via the labour market often goes together with integration via inputs and marketing of agricultural products. Bigsten and Collier (1981, p. 13) conclude that regular employment 'has a strong and significant impact on smallholder innovation and that agricultural innovation has a very strong impact on farm income'. Also Kershaw (1977, p. 189) concludes that in the households with more than 7 acres of land and especially in the ones with more than 14 acres of land 'almost all men are also employed, usually in prestigious occupations such as teaching and the civil service. In addition they often operate various business', and because of this regular other income

they are the ones who are able to spend money on improving their breeding stock, make other capital improvements to their land and invest in cash crops. Also they are the ones that can take the risks of experiments with new crops, new methods, new seeds etc.

On the other hand the families with only a few acres of land do have many problems, they cannot take the risks of innovation or they don't have the money to buy better inputs or try new methods.

Haugerud (1981) mentions differences between agricultural households as a result of growing different crops. Her whole Embu coffee-growing area was wealthier than her Embu cotton-growing area. Also in Machakos Medical Research Centre (1979) found the same differences in wealth between a coffee- and a cotton-growing area.¹⁾ Haugerud (1981, p. 13) concludes that 'cash crops are a more important agent of economic differences between eco-zones than they are within eco-zones'. But according to her, off-farm incomes are shown to be a far more important contributor to economic inequality within the peasant economy than cash crops.

In addition to the above mentioned studies there are several detailed studies published in Kenya about the situations of differences between households: for instance the Integrated Rural Surveys (CBS), the ASALD-pre-investment surveys (USAID/GoK 1979) and Cealey and Merchant's survey of commercialization (1979). Various other studies work with interview results pointing at rural differentiation (Mooock 1976, Hopkraft 1974, Hunt 1977, Carlsen 1980, Thom 1980, Wisner 1978 and many others).

In West Pokot and Elgeyo Marakwet differences between households could be the result of the different types of agricultural production that existed before and still exist.

1) Measuring wealth in an area where part of the households own cattle is very difficult and we have to be extremely careful with the results. Many times cash from selling one head of cattle can mean as much cash income as the earnings from one acre of cash crops. Differences in crops often go together with differences in ecological potential, a variable that influences income from farming very much.

It is possible that integration in the market economy works out in a different way in the different types of agricultural production and that economic differentiation increases between the different types of agriculture.

There are e.g. indications that commercialization of rainfed agriculture takes place more and more in areas which were used as dry season grazing areas may be resulting in a deteriorating position for the nomadic pastoral households.

In West Pokot and Elgeyo Marakwet we find four main types of agricultural production between which differences exist and differentiation probably is growing:

- nomadic pastoral production with little or no agricultural cultivation at all;
- a combination of agricultural cultivation and animal husbandry;
- agricultural rainfed cultivation with little or no cattle;
- agricultural irrigation cultivation with little or no cattle.

Not much has been published on household differences within pastoral societies and between pastoral and agricultural societies. However recently the theme gained popularity as can be seen in the reader about the future of pastoral people (Galaty 1981). Also Wiener (1978) tackles the theme, using the concept of ecological marginalization of crop production. Van Zwabenberg and King (1975) give a more political explanation of the marginalization of pastoral households in Kenya.

The process of household differentiation

Empirically more difficult but theoretically more important are the processes of household differentiation. It is obvious that the very different situations and the different possibilities of households can result in further differentiation between households.

E.g. for the commercialization variable one can find households becoming more involved absolutely (volume of production, money received, hours spent, ha. of land) and relatively (% of labourtime; % of land) in production for the market. At the same time households can be found where commercialization is becoming less important. These contradictory

processes can be part of one logic: for instance some expanding households are buying/acquiring land from others and are progressively working with (partial) wage labourers who are proletarianizing, losing land previously used for commercial or even self-supporting production and losing labour power for their own farms because of the necessity to work elsewhere. In Kenya these processes are documented for instance for Central Kenya (Lamb on Murang'a, Cowan on Myeri, O'Keefe and Wiener on Kiambu, Hunt on Embu and Wiener on part of Meru). Carlsen 1980 is proving it for Kisumu, Kisii, Taita and Kwale too.

Labour migration can have the same contradictory results on the household level: for some households money sent back gives opportunities for accumulation (buying means of production; hiring wage labour; sending children to secondary or even university education). For others it primarily means a drain of labour power which cannot be compensated for financially by hiring other wage labourers, because the money sent - if sent at all - is merely used to buy the most essential foodstuffs and clothing (see for instance Mook 1974 on Maragoli in Kakamega Distr. or Medical Research Centre 1979 on North Machakos).

Conclusions about the effects of labour migration on household differentiation are quite diverse.

According to Kershaw (1977) outmigration of men is concentrated in the group of households with small acreages of land. Large landowners usually also have wage labour jobs and/or business but close to home. So the men can be at home a good part of the time and can keep an eye on their agricultural worries.¹⁾

On the other hand e.g. M. Veldhuis (1981 in a household survey done in Northern Machakos in the Medical Research Centre) concludes that migrant

1) We have some doubts about large landowners who usually have jobs in the local area. All civil servants (one of the two types of jobs Kershaw (1977) mentions) have a very mobile career. Usually staying only one or two years at one place and mostly starting at very peripheral and far away places. Besides many of the well-paid jobs are located in Nairobi and the few other big towns of Kenya and most of these better-paid employees own land at home and/or in other rural places.

households have a higher income and invest more than the other households of the area.

It is obvious that the level of the outmigrant income and especially how much of this income he saves for/spends at home is very important for the so-called 'effects of outmigration of men'. Before reaching conclusions about these effects one has to divide the group of migrants into migrants with high, medium and low income or remittances to their rural home. Also outmigration is very much 'age-bounded'. So before concluding anything one has to take into account the phase in the life-cycle of the migrant household.

In most studies about the effects of outmigration a migrant household is a household in which the 'head' of the household is outmigrated. But many of the 'effects of outmigration' can be found too if one of the other household members e.g. a grown-up son of the head of the household, is migrated.

As a result of these contradictory processes of household integration income differentiation is changing: one group of households is growing richer, a second group is getting in a 'downward transitional' spiral of absolute impoverishment and a third group is stagnating, forming this as a situation of relative impoverishment (see especially Wiener 1978, e.g. p. 227).

One of the difficult empirical problems is the operational definition of household. In most social research the definition is used with the emphasis on 'eating together'. In micro-economic research the main variable is the income brought in and used together. But Kenyan households are very complex; income is brought in from several sources by various people who are only partially forming a consumer unit, who do not bring all their money in and who do not have a say in all the money brought in. Besides, the household composition is changing very often. Apart from that, Kenyan households do have very different traditional backgrounds even within districts (compare for instance 'Hill' and 'Plain' Pokot).

To be honest, for us it is not yet possible to suggest an operational definition. We need advice from people who did micro-studies in the areas concerned. It seems necessary at least to work with contiguous micro-areas in which every one must be interviewed, to be in a position to 'construct' households afterwards.

But still the many people not at home, and especially the labour migrants, are missing and their influence within the household can only be found by careful and detailed interview techniques.

We started this chapter by warning against 'ecological fallacies'. But now we must say that regional and social differentiation are combined in many areas. If we use 'location' as a spatial unit and 'household' as a social unit we can group the households into social units of comparable situations. If we plot these households on a map, certain spatial concentrations would most probably appear (see Wiener 1978 who calls this a 'situation of spatial-temporal adjustment to a certain ecological environment').

Especially in semi-arid areas with large micro-physical variations social 'upward mobility' households will be concentrated in relatively high potential land near central places; pushing out 'downward mobility households'. This marginalizing group of households will tend to be pushed to ecologically marginal areas, where they find stagnant households at a very low level of integration (Wiener 1978, Hunt 1977; but Thom 1980 gives figures from which other tendencies could be read). In these marginal areas central services which cost money will not make much chance: no shops or market places, no roads, no schools: the spiral of marginalization will be combined with a spiral of neglect.

However we have to be careful with long term conclusions. High potential micro-regions with a concentration of 'upward mobility households' can be devastated ecologically by exactly those households, 'accumulating on their own graveyard'. Also growth of commercialization with a neglect of self-sufficiency in food, risks complete crisis in periods of drought, in which the marginal households but also the most commercialized households may be effected more critically than others.

Before finishing this part it is useful to say that our economic definition of differentiation between locations and households, stressing the growing differences in various aspects of market integration between these units, is much narrower than the sociological definition of differentiation, used for instance by Mbiti (1971) in his stimulating work on 'social differentiation and agricultural development in East Africa'. Following Durkheim he defines differentiation within a society or community as a 'linear growth in complexity of social structure' and makes the concept 'more or less synonymous with social division of labour' (Mbiti p. 15). While in our approach the emphasis is on differences between research units, in Mbiti's approach the emphasis is on the degree of complexity of the structure of a unit itself and on the information flows entering this social unit. At one place he even defines differentiation as 'the units capacity to process a diversity of information types' (p. 18). Mbiti suggests that growing differentiation of village communities and farm households (in his definition) does stimulate farm practice adoption, rural labour mobility, non-farm occupations and a larger cash crop ratio, four dependent variables that are intercorrelated themselves at a high degree. If we look at his subscales of differentiation (his independent variable) we do see a large number of variables closely connected with government policy (e.g. farm mechanization, crop husbandry practises, animal husbandry, formal contacts and experience etc.). Although we do not use his definition and approach, his analysis offers many important insights.

External change agencies and their influence on household differentiation

Private farms, missions and government activities do change rural communities in socially selective ways. Sometimes already existing local power groups or economically wealthier people are favoured. Sometimes the local economic and political hierarchy is changed. In this part of the summary of literature that is relevant to our research, we will give only a few examples from Kenyan case studies from a field of research that is growing rapidly.

In early colonial times the provision of educational facilities, most of the time connected with missions, attracted either children from leadership groups or - more commonly - children from socially marginal groups. Forbes Munro (1975) illustrates this clearly for Machakos; Mutiso does the same for Kitui in his various 1977 articles. A generation later these children became the core of the 'progressive farmers' and of the new leadership within the African Local Native Councils.

In late colonial and postcolonial times high quality educational facilities were especially used by children of urban and rural higher income parents, who were also the most influential groups in creating high quality schools, especially in Central Province. At the same time the fast social upward mobility soon after independence for those with higher education quickly spread the idea of the importance of education (see especially Mwaniki 1973).

Government services in the agricultural sphere were strongly directed towards the group of 'progressive farmers', educated, having more land and being partly commercial already. Leonard (e.g. 1977) illustrates this again and again for Western Kenya and connects it with the fact that extension agents are belonging themselves to a social elite and act within a social environment of this same elite. Also the evaluation of SRDP (IDS, 1977) in West Pokot comes to the same conclusion. Steenwinkel (1979) agrees but adds that the extent of this elite within various villages is very much dependent on the general population pressure. He also extends the idea of social selectivity of the extension service to other agricultural development efforts: the provision of credit, the membership of cooperative societies, the use of veterinary services. Staudt (1978) makes it clear that the social selectivity is not only a class selectivity but also a sex specificity: several services are male oriented (extension, credit and marketing organisations) while part of the farm work and also part of the farm decisions are a responsibility for women and a large proportion of the farms do have a female head of the household, especially in areas with high labour outmigration (see also Mook 1976 for a case study of Maragoli in Kakamega District).

Government effects on social acceleration of differentiation are very complex. This becomes clear for instance from Njeru's study on the effects of land adjudication in Mbera, Embu District (Njeru, 1978). The raise of agricultural production, the promotion of access to development facilities, e.g. loans and the promotion of personal efforts to 'modernise' are all presented as 'class neutral' incentives following land adjudication. But land fragmentation was already a fact in many areas that were to be registered and which was hidden through socio-economic mechanisms of land lease, free use of communal grounds (for charcoal burning, beehives, pasture land etc.) and various redistribution measures. The individualization of land ownership formalised the existing differences in social wealth, especially in land ownership, and stimulated the development of a capitalist land market. Small peasants are forced to sell parts of their land, not being able to feed their families and to pay for the education of their children with their earnings from agriculture, from casual wage labour and from the sales of livestock. Rich peasants buy land and more and more land is concentrated in the hands of a few households.

The monetary value of land stimulates an orientation towards profitable crops: wasteland is cultivated, livestock reduced (although rich peasants increase their grade cattle). One of the social consequences is that also many land feuds, especially between free users of wasteland, mainly the very poor, and the owners. On the social strife and breakdown of social authority structures related, also Sorrenson (1988) gives many examples describing the land reform in Kikuyu-country.

Carlsen (1980, p. 191-192) concludes that various processes of income and land concentration are combined in the Kenyan countryside. The same households are combining the income from civil servant jobs, from non-agricultural business, especially small shops, hotels and restaurants, transport services (small pick-ups and lorries transporting people and agricultural produce) and rural industries and from high-yielding crops. He suggests that this process of capital accumulation by these households 'has been initiated often with savings from employment in the public sector as the origin of the accumulation process'.

From other studies it becomes clear that part of the labourmigrants succeed in investing part of their income in activities expanding

their income further. We conclude that it is important to study the various processes of economic integration together, not only at the level of the location but also at the level of the household. Also we should not neglect off-farm activities and we should look at civil servants not only as actors within development efforts but also as actors within the process of economic integration and differentiation themselves.

a) Market integration of agriculture

New inputs in agriculture like fertilizer, insecticides, new seeds, new crops and mechanization in agriculture can result in a different total amount of work, work in other periods of the year, completely new tasks and old tasks eliminated.

Palmer put together several case studies about the effects of 'modernization' of agriculture and found that usually working hours are increasing for both men and women. Sometimes it results in more extra hours for men than for women, but the total number of hours worked is always larger for women than for men, because that includes usually between four and seven hours per day for household tasks (Palmer 1977, IDS 1977, Hanger and Norris 1973). Reyes with the exception of a man becoming 'a progressive farmer' and spending all his time in agriculture. Also Winger (1978) reaches the same conclusion after the introduction of coffee in Kitul.

Hanger and Norris (1973) found that women on the Pusa rice scheme had much more work than the women outside the scheme where maize and beans were produced for subsistence.

In addition to the usual increase in total number of working hours required for the new inputs of crops e.g. Cassava that made it very clear that some introductions require a lot of labour in specific periods resulting in labour constraints in those periods. Also Hanger and Norris stress this point. Chris Geoffrey (1979, p. 17-18) puts together some literature on this item and mentions that certain tasks take much more time than before the innovation and that especially the introduction

d) THE EFFECTS OF MARKET INTEGRATION ON CHANGES WITHIN HOUSEHOLDS

Increased integration into the market economy has its effects on households and there is evidence that it is a differential impact on the different members of the household. (Boserup 1970, Palmer 1977, Mutiso 1977, Hanger and Moris 1973).

Tasks

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of fertilizer and insecticides result in new extra tasks. Because usually tasks are attributed according to sex and age this can result in labour constraints for either men or women.

Among others Stichter (1975) and Jane Wills (1967) say that often women take over tasks of men, but that it is seldom the other way around. As often the men are not at home this is not very surprising. However according to Mette Mønsted (1977) male wage labourers take over tasks which were before tasks for both sexes e.g. ploughing is now done by men while before the soil was made ready with the jembe by both men and women. Also Maize milling in a posho mill is now done by men while before it was a women's task.¹⁾

These last two examples take us to the difference between bio-chemical and mechanical agricultural technology also accounted for by Elsie Garfield (1979, p. 4). The bio-chemical modernization is usually landsaving and very labour intensive and increasingly used in Kenyan small scale commercial agriculture. Mechanical innovations like tractors for preparing the land - and less important in small scale agriculture - sowing-, weeding- and picking machines are labour saving and are always operated by men, thus resulting in the above mentioned differential impact at household level.

Palmer reaches the following conclusion:

'Modernization of agriculture in Africa usually means both additional labour intensive work and high productivity work, but women usually find they are left with the former. In so far as they are allocated the labour intensive, poorly paid or totally unremunerated work, women are being 'marginalized' (or pushed out) to the well-known periphery of the modernized sector' (Palmer 1977 p/d).

In the literature not much is to be found about the impact of agricultural innovation in households which practised traditional irrigation and in formerly pastoral households.

1) The ability of households to solve their labour constraints is a resultant of their economic position and of the amount of land which they cultivate.

Although formerly pastoral households are reported to start practising agriculture in river valleys in the dry areas of West Pokot, it is not very likely that these households are the ones where agriculture innovation is taking place. In West Pokot and Elgeyo Marakwet agricultural innovation is concentrated in the high areas which were formerly used for traditional agriculture or not at all.

If there would be a direct change from nomadic pastoralism to 'modern' agriculture the changes in type and amount of tasks and of division of tasks between sexes and groups would be enormous (e.g. Brown, 1980). There is some literature about changes in areas where traditional irrigation is practised. Transferring of tasks takes place after modernizing the irrigation system.

Originally the responsibility of building and maintaining the system was with the council of elders, who divided the tasks between the young men of the tribe. When the original system was changed and new building methods and materials were used (e.g. concrete instead of wood) and consequently the maintenance work changed, the local community felt that the maintenance was the responsibility of the builders (government or foreign funds) as they didn't have the knowledge and appliances to maintain such a new system. So this change meant an alleviation of tasks for young men.¹⁾

Hanger and Moris notice one very important aspect of irrigation-fed agriculture: the fact that labour demands for irrigation-fed agriculture - because of their not season-bound production- can compete with the rain-fed, season-bound subsistence agriculture which is usually practised alongside it by the same households.

E.g. Hanger and Moris (1973, p.234) notice a direct clash in work priorities at the time when the rice crop needs weeding and the subsistence plot needs to be planted to catch the short rains. Also for some households²⁾ the preparation of the land for the long rains and the planting

1) Sometimes with disastrous results as often no maintenance at all took place after the initial building of the system.

2) Depending on when the rice was planted in which field.

of the food crops comes immediately after the rice harvest when women will have been working very hard in the fields. If the women take some rest after the harvest of rice they risk missing the optimal time for planting maize and beans and thus get lower yields (agricultural research in Kenya has indicated that maize yields are unusually sensitive to delayed planting).

In West Pokot and Elgeyo Marakwet where plans for extension of irrigated agriculture are manifold and extension is already taking place this is a point which we have to take into account.

b. Labour market integration

It is evident that the more people in a household are absent the more tasks remain for the persons who are left behind. This is especially so because in Kenya agriculture is usually counted as a household task. If the leavers are grown up and able to work effects are more outspoken. So integration via wage labour and even more via wage labour outmigration has its effects on the number of household tasks of the ones left behind.

According to Stichter (1975, p. 48) agricultural production did not decline in the colonial period although labour outmigration amounted to a very high percentage of men between 15 to 50 years of age. The production per capita increased and in general areas with the largest increases in production were also the areas with the largest percentage of labour-migrants. Stichter concludes that in the face of all this 'the bulk of the increased agricultural labour fell to the women'. We conclude from this that once again different types of integration seem to take place jointly.

Also Hanger and Moris (1973, p. 225), Mønsted (1977, p. 265-6) and Mickhewite (1976, p.34) reach the conclusion that outmigration of men means that women take over many formerly 'male' tasks.

Besides this taking over of male tasks by women both Mønsted (1973, p. 225), Hey (1976) and Valdhuis (1981, p. 105) mention the increase in hiring wage labourers.

Hay (1976) found that the labour constraints resulting from outmigration sometimes were tackled by labour-saving innovations. Changes to more labour-extensive crops are recorded to be the result from labour outmigration. The impact of wage labour and of labour outmigration for a household depends very much on the number, sex and age of the remaining members of the household and besides on how long, how far away and in what agricultural periods the labour migrant is absent. If labour migrants can take holidays in peak agricultural periods and if he is at home every weekend it is possible that many of the labour constraints will be met.

c. Integration within formal education

There is one more thing about tasks which has to be mentioned. For West Pokot and Elgeyo Marakwet we made an estimate¹⁾ of the participation in primary school education of children aged 5 to 14 years and found that in Elgeyo Marakwet the percentage went up from 24 in 1973²⁾, 76 in 1976 to almost 100³⁾ in 1980. The percentage for West Pokot also showed a marked increase, but was in 1980 much lower than that of Elgeyo Marakwet. It went up from 26% in 1976 to 56% in 1980.

It is evident that this development has an enormous impact on tasks of the other household members as the tasks of children in West Pokot and Elgeyo Marakwet were manifold: birdscaring, taking care of smaller children, herding cattle, sheep and goats and of course this is a main explanation for the still low participation rate in education in West Pokot in comparison with other districts. As can be read in the District Development Plan West Pokot 1979-83 (p. 94) it is the main reason for the failure of adult education too: 'most of the classes have failed because students or would-be students have abandoned classes in favour of taking care of their family's livestock'.

1) We based the estimate on Census population figures of 1979, growth rates between 1969 and 1979 and school participation in numbers from the Statistical Abstract 1981.

2) District Development Plan 1974-78 Elgeyo Marakwet (p. 7)

3) Adult education partly explains this percentage.

Also Schellenberger (1981) found that in Kitui the change from millet to maize is at least partly the result of the enormous increase in formal education (millet needs much more scarecrowing than maize, which was done by children).

Schellenberger (1981, p. 98) gives an interesting table for Kitui, an area where outmigration reaches high percentages, even in the Kenyan context.

Table 1 Labourwithdrawal in Kitui

year	1 economically active population	2 wage labour out- migration	3 school par- ticipation in numbers	4 potential pupils	labour withdrawal (column 2+3) 1+4
1896	72.950	150	0	40.600	0.1%
1951	133.446	12.897	4.900	65.071	8 %
1979	292.785	39.815	120.299	134.418	37 %

Source: Schellenberger 1981, p.98.

He tries to get a picture of the labourwithdrawal from Kitui households. He adds the number of labour outmigrants and schoolparticipants and takes these together as a percentage of the economically active population combined with the number of potential pupils. He shows that labourwithdrawal from households increased dramatically (without taking into account local work outside the household which also increased).

Consequences of this labourwithdrawal must be considerable for the remaining household members. As schoolparticipation rates are higher for boys than for girls and as labourmigrants and other wage labourers are mainly men, household tasks must have increased for the female part of the population.

Access to productive resources / incomes / decisions

Integration of agriculture among many other things means registration of land and private landownership. Usually this is male ownership. E.g. O'Pala (1978) found in a research among the Joluo in Kenya, that 6% of the interviewed women had a landtitle on their own name and 6% owned land together with their son. All the other interviewed women had no officially registered landownership.

This male ownership means that mainly men can use land as security when they need credit. Also because men usually have more cash money, they are the ones who can buy or rent land. All this does not automatically mean however that the usufruct of land by women is diminished.

It is useful to investigate the changes in the ownership of cattle too, the key productive resource in pastoral societies (Broch-Due, Garfield and Langton 1981, p. 253). They point at the 'misconception prominent in the thinking of development planners - that cattle are solely controlled by men, although women may possibly have special rights to sheep and goats'.

In fact, cattle is often allocated to women at the time of their marriage and on the marriage of close kin. Although a young woman may have only milk rights in an animal, elder women actually own cattle. This misconception can have serious consequences for ownership and decision rights of women when all attempts at improving herds or commercializing the livestock economy are directed at men. Changes from milk to beefcattle often propagated by development planners or a change to commercial milkproduction can result in different effects for the different members of households.

Officially men are approached as the owners and 'managers' of land. Staudt (1977 and 1978) deals extensively with this and shows that female-headed farms are neglected by extension services not because they are not innovative but because they are 'female'-headed. Also training-courses and barazas are mainly men's business irrespective of the fact that women do much work in cash crop agriculture.

In large scale irrigated agriculture (but probably too in small scale irrigation projects as long as there is a central male management) like

in Mwea (Hanger and Morris 1973) men are approached as the head of the household as if he were the principle labourer and decision-maker for the irrigated fields farmed under a tenancy agreement with him, whereas the women tribute the larger share of farmwork and take many decisions. Also usually men are members of cooperatives. Staudt (1976, p. 272-73) found that only 7% of the cooperatives members were women and all were widows.

In this way integration of agriculture in the market economy can mean 'an increase in the productivity gap between men and women'. It also means that usually men control income from cash crops. Women usually retain incomes from sales of subsistence crops (Boserup 1970, Mbilinyi 1976, Mønsted 1977) and milk. When the difference between cash and subsistence crops gets blurred increasing family disputes between husband and wife are the result, especially when there are few crops in the granary (Garfield cites Mønsted 1977, p. 283).

If men sell land which was formerly used by their wives for subsistence or if subsistence land is changed into cash land women can get into problems because they are expected to feed the family and cash income from her husband is not easily spent on food as is clearly demonstrated by Hanger and Morris. Sometimes these problems are met by wage labour of women.

As a result of increased market integration both incomes and expenditures and also responsibilities of the different members of the household change substantially.

Both men and women take management decisions in agriculture (O'Pala 1978, p. 19, Staudt 1978, p. 3) but Hanger and Morris found that in the rice scheme the men took more decisions than they did in the neighbouring self-sufficient area. Also Kershaw's research points at the same conclusion; she found that the decision making roles of women in the rich, progressive agricultural households diminished.

Labour migration usually means an increase in the decision making authority by women as Abbott (1974) and others found. M. Veldhuis (1981) found that migrants wives much more than other wives took decisions about agricultural production alone and anyway took more agricultural

3. A DESCRIPTION OF MARKET INTEGRATION IN WEST POKOT AND ELDEYO DISTRICTS

decisions than other wives. Decisions regarding the main cash crop in the area (coffee) were more often taken by both men and women in migrant households or by the wife alone, although the men remained the main decision makers in this area. As a conclusion we can say that increasing integration brings along changes in the decision making roles. Integration of agriculture seems to have the effect of increasing the male decision making roles. On the other hand increasing male labour integration seems to increase the decision making roles of women.

The area has a very low population density (e.g. Migori District has 10 inhabitants per km² in 1979 according to the census results). Its commercial agricultural production is low too. Only a few hundred households, i.e. 2% of total households are producing commercial crops: coffee, pyrethrum, cotton and potatoes and there are only a few dozen commercial wool- and dairy farmers. More households are selling surplus food crops; especially maize maize are marketed. A few thousand pastoralists are selling one or two head of cattle per year. Most pastoralists and agro-pastoralists are almost completely outside the money economy, earning only a few KSh with the sale of hides and skins. More important still is the barter trade of livestock products against millet, sorghum and other food crops within the area. Although income out of wage employment in the district (mostly by civil servants) was low, income out of commercial agriculture was even lower: in 1980 agricultural sales were KSh. 930,000 (our estimate, see table 2), while wage income was KSh. 1,120,000 (Statistical Abstracts, 1981).

Hypothetically we suggest that most commercial farmers are also civil servants and also that most of the 2300 wage earners in 1980 were non-Pokot. The Pokot population was hardly integrated in the labour market, neither in the district itself nor as labour migrants elsewhere.

However, since 1970 and especially since 1975 things seem to change rapidly. The new road from Kitale to Lodwar passes through the district, linking Kapenguria, Griess and (although not directly) Sior to the

3. A DESCRIPTION OF MARKET INTEGRATION IN WEST POKOT AND ELGEYO MARAKWET DISTRICTS

West Pokot and Elgeyo Marakwet are both economic peripheries within Kenya, but they have a very different history.

Until recently West Pokot has been an economic fringe area, regarded as a strategic barrier only and not as an area for potential development. Its ecologically high potential southern part still has a very low population density (e.g. Mnagei Location only 90 inhabitants per km.² in 1979 according to the census results). Its commercial agricultural production is low too. Only a few hundred households, max. 2% of total households are producing commercial crops: coffee, pyrethrum, cotton and potatoes and there are only a few dozen commercial wool- and dairy farmers. More households are selling surplus food crops; especially maize sales are boosting. A few thousand pastoralists are selling one or two head of cattle per year. Most pastoralists and agro-pastoralists are almost completely outside the money economy, earning only a few K&S with the sale of hides and skins. More important still is the barter trade of livestock products against millet, sorghum and other food crops within the area. Although income out of wage employment in the district (mostly by civil servants) was low, income out of commercial agriculture was even lower: in 1980 agricultural sales were Kf. 939,000 (our estimate, see table 2), while wage income was Kf. 1,120,000 (Statistical Abstracts, 1981).

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outside world and creating a number of 'boom villages' along its way (e.g. Marich). For the first time hundreds of Pokot were working for a wage as road labourers. The special Rural Development Programme in Kapenguria Division (1970-1975) created a commercial boom, strengthened by the activities of the Integrated Agricultural Development Programme. Many immigrants came to the southern part of the district, partly integrating the 'Hill-Pokot' people, partly overruling them. Compared with 1970 crop acreage in 1981 was almost three times as high. Most of the newly cultivated land was used for the production of maize and beans.

Changes were not confined to the high potential areas in the south. Ecologically low potential land, 60% of the district land area with 26% of the population (KVDA, 1981, p. 60) is viewed now as a potential area for mineral and energy development, for irrigated agriculture and - on paper - for feedlot livestock production. In these semi-arid areas the pastoral and agro-pastoral 'Plain-Pokot' population was suddenly given a shaking with a combined attack of drought, rifle armed 'ngoroko's', General Service Unit activities, 'proper clothing' campaigns, road work camps, irrigation projects and exploring research teams. In market integration terms not much has happened yet to them but the ground has been prepared for far going changes.

FIGURE 1 THE DEVELOPMENT OF THE CULTIVATED AREA IN W.P. AND E.M.

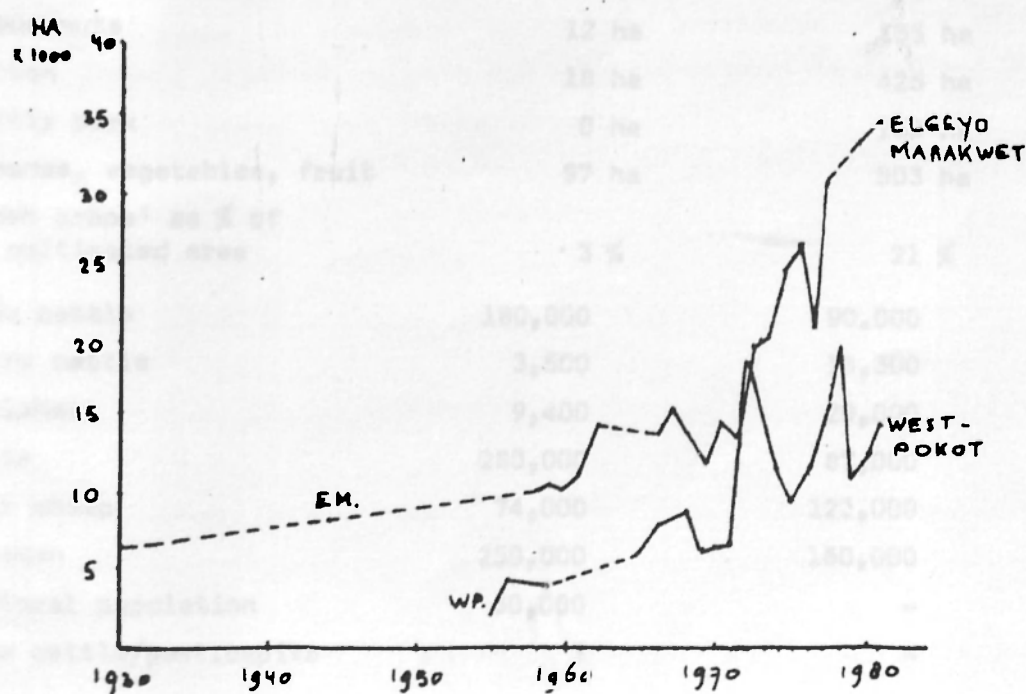


TABLE 2. AGRICULTURAL PRODUCTION IN WEST POKOT AND ELGEYO MARAKWET

	West Pokot (1979-1981 average)	Elgeyo Marakwet (1979-1980 average)
District area	9,090,000 ha	273,000 ha
High potential area	123,700 ha	104,000 ha
Cultivated area	11,000 ha	30,000 ha
Cultivated area as a % of high pot. land	9 %	29 %
Agricultural and agro- pastoral population	100,000	140,000
Cultivated area/agricul- tural and agro-pastoral capita	0.1 ha	0.2 ha
Maize	8,563 ha	19,676 ha
of which intercropped with beans	2,198 ha	5,875 ha
Finger millet sorghum and cassava	1,768 ha	2,990 ha
Wheat	0 ha	3,700 ha
Engl. potatoes	75 ha	525 ha
Pyrethrum	39 ha	1,325 ha
Coffee	23 ha	0 ha
Tea	0 ha	38 ha
Sunflower	151 ha	64 ha
Groundnuts	12 ha	155 ha
Cotton	18 ha	425 ha
Wattle bark	0 ha	150 ha
Bananas, vegetables, fruit	97 ha	503 ha
'Cash crops' as % of cultivated area	3 %	21 %
Zebu cattle	180,000	90,000
Dairy cattle	3,500	18,300
Woolsheep	9,400	29,000
Goats	280,000	87,000
Hair sheep	74,000	122,000
Chicken	250,000	160,000
Pastoral population	60,000	-
Zebu cattle/past. capita	3	-

Source: District Agricultural Reports ; all figures are estimates.

The market integration of Elgeyo Marakwet started much earlier, especially in the southern, Elgeyo-part. From 1920 - 1950 the district was an import migrant labour supply area to the White Settler areas of Uasin Gishu and Trans Nzoia Districts on its border. Rapid commercial developments started from 1950 onwards, based in the border areas of Uasin Gishu (in Irong and Mosop locations) and concentrating on potatoes, pyrethrum, wheat and maize. Commercialization was so fast that researchers like De Wilde (1967) and Ruthenberg (1966) were eager to report one of the most surprising small scale agricultural developments in Kenya.

This commercialization drive in the 1950's was accompanied by a large enclosure movement, by some mechanization and by a number of government programmes within ALDEV (African Land Development, 1946-1962, see Ministry of Agriculture etc. 1962). Elgeyo Marakwet, or better: the highland parts of Elgeyo, were booming, but this was not going to last long. In 1962 the floods washed away part of the new infrastructure. In 1960-1963 most of the 'progressive farmers' drifted away to the planned and unplanned/spontaneous settlement areas in Uasin Gishu. From 1962 to ca. 1967 government intervention nearly came to a stand-still. From a government point of view Elgeyo Marakwet was kept at a 'backwater' position since (e.g. see Kipkorir 1981). But this does not mean that nothing happened. In the 1960's dairy production developed quickly in the south as well as woolsheep production in the Cherangany's. In the western higher parts of the escarpment hybrid maize proved to be a big success and recently also beans and vegetables boomed. The development of the cultivated area is given in Figure 1 and marketed production is given in Table 2, using District Agricultural Reports.

Source: District Agricultural Reports. All figures must be seen as rough guesses.

TABLE 3 THE RATE OF AGRICULTURAL COMMERCIALIZATION AND THE INCOME FROM MARKETED AGRICULTURAL PRODUCE, E.M. AND W.P.

	Elgeyo Marakwet (1979-1980 average)		West Pokot (1979-1981 average)	
	% commerc. sold	value K£000	% commerc. sold	value K£000
Wheat	95%	260	-	-
Maize	12-30%	235	20-25%	324
Millet	3%	5	13-23%	44
Sorghum	0%	-	28-57%	33
Engl. potatoes	0-94%	680 (1980)	21-100%	17
Beans	2-43%	83	15-50%	108
Bananas	0%	-	5%	1
Vegetables	83% (1980)	600 (1980)	?	4
Sunflower	100%	4	100%	10
Coffee	-	-	100%	2
Tea	100%	1	-	-
Cotton	100%	15	100%	0
Pyrethrum	100%	50	100%	1
Wattle bark	100%	18	-	-
Total crops		1,951		544
Income/capita		14 K£		3 K£
Livestock (1979)	offtake rate		offtake rate	
Cattle	8%	390	3-9%	336
Goats & sheep	15%	28	8%	?
Hides & skins	?	41	?	52
Milk	18% sold to KCC	135	?	3
Wool	100%	30	100%	4
Total livestock		634		395
Income/capita		5 K£		4 K£

Source: District Agricultural Reports. All figures must be seen as rough guesses.

Until 1975 the commercial developments seemed to be restricted to the High Potential Areas of the district, excluding almost completely the Kerio Valley and the Lower Escarpment part. (Those low potential areas are 55% of the district area with 35% of its population (KVDA, 1981, p. 60, corrected).

Since 1975 however things are going to change. A fluorspar mining company was established in Kimwarer in the southern part of the valley, which produced - in gross value terms - in 1981 more than the entire agricultural sector of the district. Cotton production was introduced too, also in the Marakwet part of the valley. Plans were launched to build a railway through the valley. Finally new interest was developing in the ingenious traditional irrigation system of the Marakwet (see e.g. Ssenyonga 1981 and Soper 1981). It is to be expected that most ASAL-activities in the district will be located in this area, which is still very isolated. Also the activities of the Kerio Valley Development Authority will result in radical transformation (Ssenyonga 1980, KVDA 1980, KVDA 1981).

Development was not only spatially selective until now; market integration was socially very selective too. We estimate the number of households in Eloeyo Marakwet at 25,000. From these households 3,814 persons were involved in wage employment within the district (earning 1,300,000 Kf or 342 Kf per worker), most of them employed by the state. This is 15% of total households. We estimate the number of labour migrants going outside the district at ca. 2000, earning ca. 350,000 Kf, of which a part will flow towards their next of kin within the district.¹⁾ If 2000 households are involved this means another 8% of the total.

1) The sex ratio of the districts children is above 1; for the 15-49 age group it is 0.939. A 'normal' sex ratio in this age group would have meant 64,698 people. There were only 62,712 of them. Hence our estimate of 2000 labour migrants. The earnings per worker are estimated at a low 180 Kf/yr, a minimum wage for wage labourers outside the main towns. Probably it is higher.

We think that mostly the households, with additional non-farm income, are involved in commercial agriculture: some 200 rather large scale wheat growers (earning 1300 K£/yr on average), 750 potato-farmers (in good years some 900 K£ each), 150 wattle growers (120 K£ each), 2500 dairy farmers (50 K£ each), 750 woolsheepherders (40 K£ each), 2000 pyrethrum growers (25 K£ each) 200 tea producers (only 3 K£ each) and a few hundred cotton and sunflower growers.

Although the earnings per farmer (and the number of farmers) are our very rough estimates (based upon various District Agricultural Reports) it indicates that they were highly unequal. If we suppose one commercial activity per household there are roughly 7000 commercial households but probably there are less because many commercial farmers combine various commercial agricultural activities (e.g. pyrethrum and dairy cattle). Together less than 30% of total households can be regarded as 'commercially oriented' and almost all of them spend probably more land and labour power on food production for home consumption. From this 30% a very small part also invests in non-farm activities: small shops, matatu's, small crafts etc., but the district is remarkably underdeveloped in this respect.

Together less than 50%¹⁾ of all households will have a regular supply of money out of wage labour and/or commercial agriculture. Most households however do have some minor income out of surplus sales of maize, millet, beans and livestock products. Together this accounts for ca. 750,000 K£ or 30 K£/household/yr if that income would be spread evenly.

The social and the spatial differentiation seem to be combined. The outflow of 'richer' peasants to Uasin Gishu in the 1960's was accompanied by a move of poorer people 'up the escarpment', partly as caretakers for the migrated 'progressive farmers'. The rapid expansion of hybrid maize and beans can be attributed partly to those 'climbing' households in Irong and Mosop locations, replacing partly the potatoes and pyrethrum of their predecessors and also investing in dairy cattle and experimenting

1) But probably less because we expect that most of the wage labourers and outmigrants are also the ones that produce commercial items.

with commercial vegetables. Another migration process, from the southern escarpment towards the Cherangany's, can explain another part of the growth of maize and beans acreage (in what used to be wasteland and dry period pasture) and the woolsheep expansion in the early 1970's.

In the late 1970's an opposite migration process can be found, down the escarpment into the valley. Probably this move can be attributed to the sons and daughters of the poorer people of the escarpment, who did not go to Uasin Gishu and Trans Nzoia, to the higher parts of Elgeyo or to the Cherangany's. This spatial move is connected with a form of 'ecological marginalization': maize replacing millets and sorghum; millet and cotton replacing grazing areas of the sheep and goats, and grazing areas replacing wasteland. The ecological and economic risks of this movement may be very great and it is worthwhile to test the abovegiven hypotheses and to look into the motivations behind this drive.

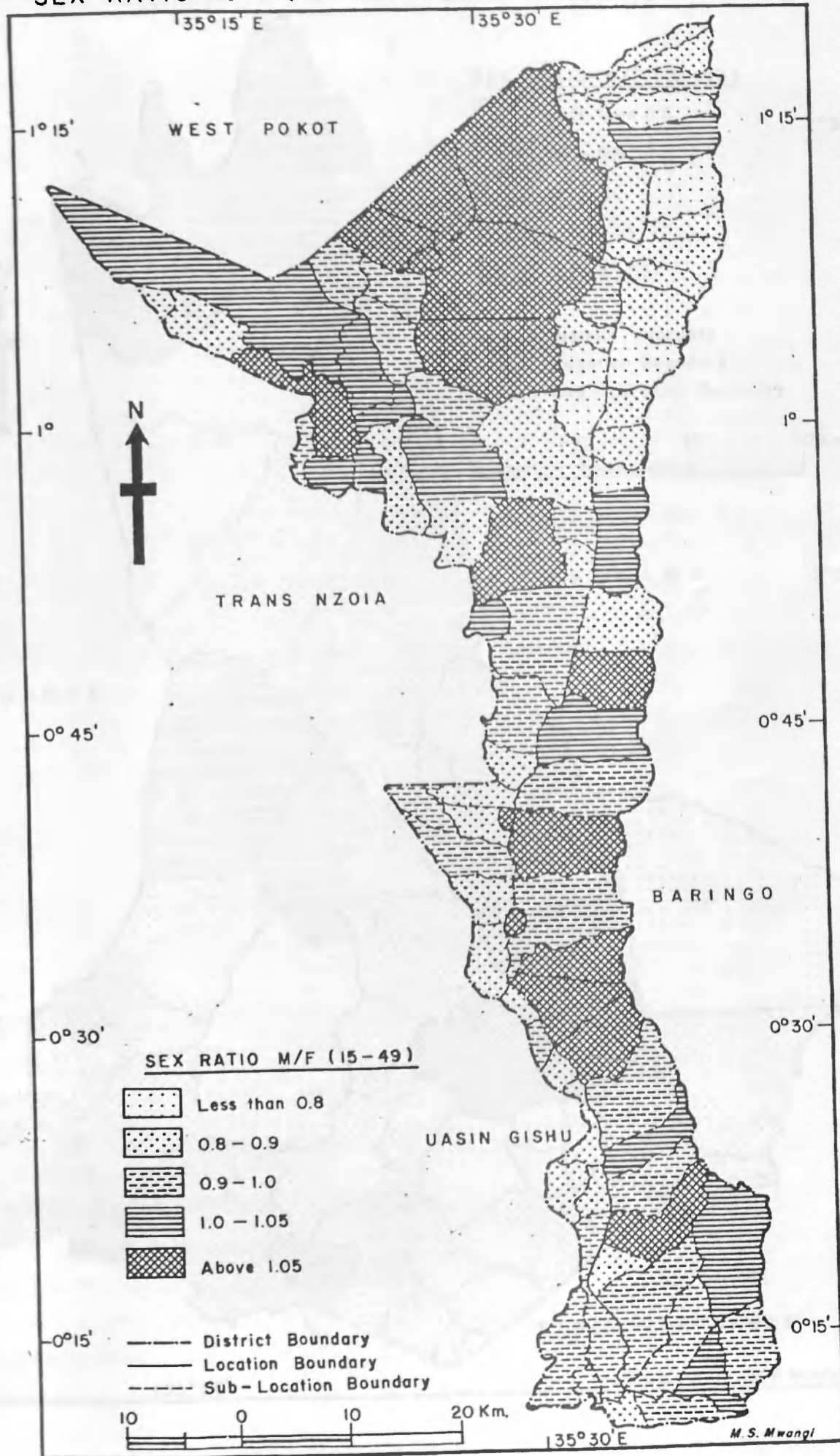
From the latest Census it becomes clear that especially adult males were moving from the densely populated western locations of Elgeyo and from the crowded settlement zones of the northern escarpment towards the valley locations. Also it becomes clear that some parts of the district were suddenly developing into extreme labour migration areas, especially in the Marakwet Valley parts. The sex ratio map is giving the details. (Thanks to Mike Mwangi: for drawing them.)

We will present our provisional findings on locational differentiation of commercialization and labour outmigration in maps combined with a table. The information presented there can be seen as reference material for the choices we make in the methodological parts of this paper.

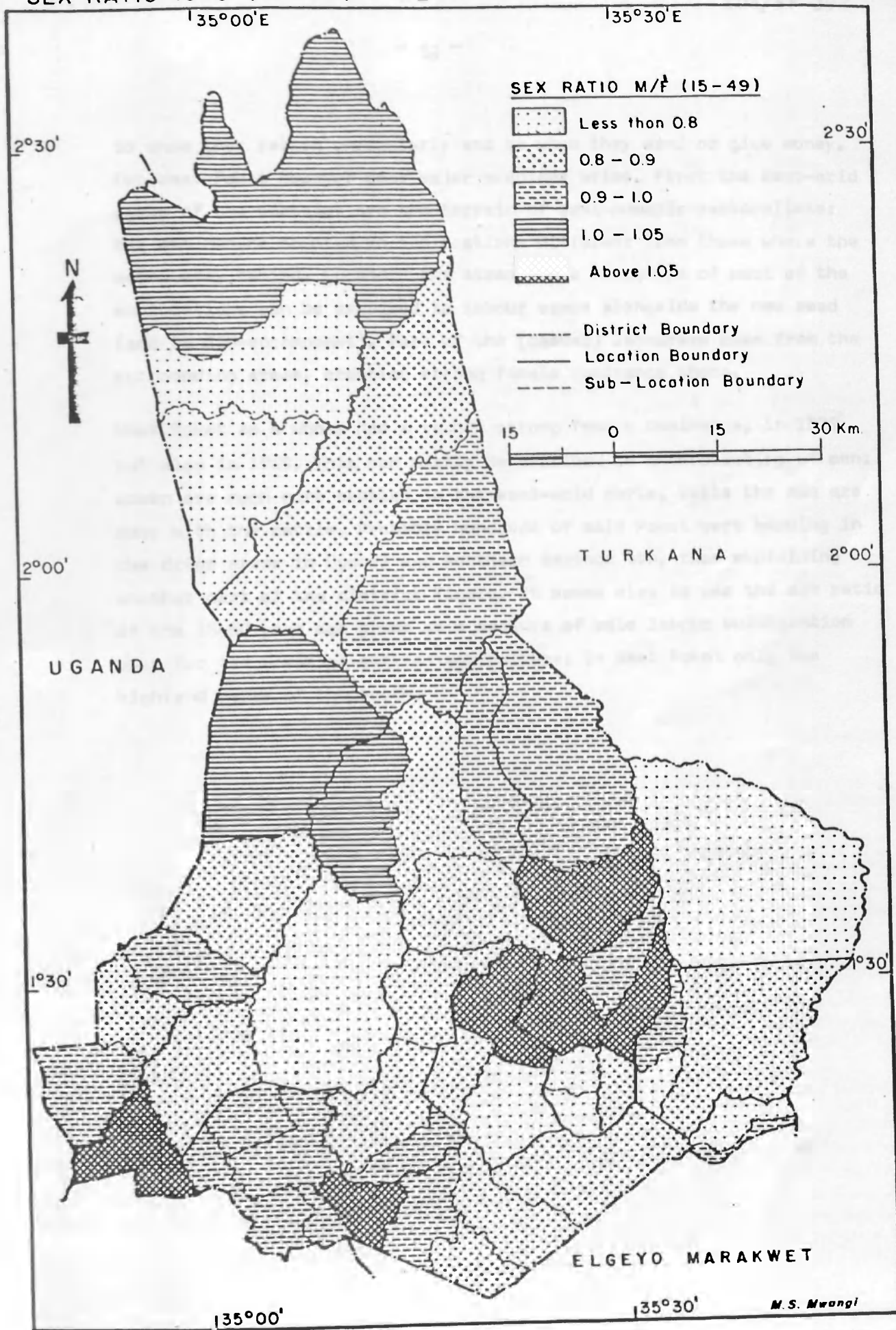
Commercialization will be presented in a table of commercial crops and livestock products, not giving any details yet about the level of commercialization.

Labour outmigration is measured by looking at the sex ratio's for the age group 15-50 years in 1979 at the level of sublocations. For Elgeyo Marakwet this seems to be a valid measure. The labour migrants are predominantly men of this age group, leaving behind their next of kin,

SEX RATIO 1979 (15-49) - ELGEYO MARAKWET



SEX RATIO 1979 (15-49) - WEST POKOT



MAP 3 LOCATIONS OF WP AND EM



LOCATION NAMES	POPULATION		GROWTH/DECLINE
	1969	1979	
1. Metkei	ca 14,013	8,966	—
2. Mosop	ca 12,512	13,073	+
3. Soy	17,160	12,156	—
4. South Irong	25,280	25,045	-
5. North Irong	8,374	10,301	++
6. Arror	ca 6,718	7,663	+
7. Moiben	ca 13,074	15,481	+
8. Sambirir	17,208	15,271	-
9. Endo	29,114	20,119	—
10. Cherangani	11,381	15,949	+++
11. Lelan EM	3,902	4,845	++
12. Lelan WP	4,415	11,149	+++
13. Cheptulel	3,559	4,238	+
14. Lomut	5,108	6,687	++
15. Mwino	5,408	7,157	++
16. Weiwei	3,988	5,515	++
17. Batei	7,022	11,136	+++
18. Kipkomo	8,375	14,628	+++
19. Mnagei	18,515	35,186	+++
20. Riwa	6,104	9,619	+++
21. Sook	8,666	9,325	+
22. Sekerr	4,079	7,154	+++
23. Masol	4,036	3,474	-
24. Suam		7,513	
25. Kapchok		7,452	
26. Kasei	} ? 16,977	4,877	+++ ?
27. Alale		13,542	

Notes: Moiben includes Kapsowar sublocation in both years.

- Growth or decline:
 - or + 0-20% decrease or increase
 - or ++ 20-40% " "
 - or +++ more than 40% " "
- The Kenya average was 40% increase. Note that if the natural growth would have been 40% too (probably somewhat less), Elgeyo Marakwet would have had 223,000 inhabitants and West Pokot 115,000. The actual figures were 159,265 and 158,652. This would suggest that in those ten years some 70,000 people migrated from EM and some 40,000 people migrated into WP. Hypothetically we suggest that the Elgeyo and Marakwet moved to Uasin Gishu and to Trans Nzoia (UG increased by 57% and TN by 109%). The migration into WP can be ascribed to some 10,000 colonists from various districts into Mnagei and to some 30,000 Pokot fleeing from Uganda and Northern Baringo (Baringo increased by only 25%).

Sources:
 boundaries: CBS Census boundaries (Thanks to M. Mwangi)
 population figures 1969: Census and population figures 1979: Census, unpublished results.
 Warning: the population figures are estimates and they could be wrong estimates.

TABLE 4 PROVISIONAL CHARACTERISTICS OF THE ECONOMY AND MARKET INTEGRATION OF THE LOCATIONS OF ELGEYO MARAKWET AND WEST POKOT

loc. nr.	Economy	Commercial products	Wage labour and male labour outmigration
1. Me	Commercially oriented agriculture and dairy	(maize) milk pyrethrum	extreme population declines, and male labour outmigration
2. Mo	commercial agr. and dairy	vegetables, milk, potatoes, pyrethrum, wattle bark, (maize)	recent male labour outmigr.
3. So	Fluorspar mining subsistence agr.	fluoride	wage labour concentration, continuous male labour immigration, peasant outmigr.
4. SI	highland: forestry commercial agr. (some large farms) and services valley: subsist.	maize, beans, wheat, (milk), (cattle), timber	wage labour concentration (Iten, Tambach, Wheatfarms) in townships: strong male dominance; elsewhere: female. valley: strong male dominance
5. NI	highland: commercial agr. valley: subsist.	maize, beans, wheat, (cattle), some timber (shoats & skins)	female dominance recently in part of the location. male dominance and population growth
6. Ar	trad. irrigated agr. + small stock	(shoats & skins)	in the valley parts: continuous extreme male labour outmigr.
7. Mb	mostly forest some subsist. agr.	timber?	
8. Sa	some trad. irrig. agr. + small stock	(shoats, hides & skins)	recent male outmigration in the valley parts
9. En	trad. irrigated subsist. agr.	cotton, (bananas), (shoats & skins)	recent extreme male labour outmigration & household outmigr.
10. Ch	forest area, food crop agr. & livestock	potatoes, tea, pyrethrum, (maize, beans, cattle)	household immigration with strong male dominance (colonization area)
11. Le	forest area, commercial agr. and herding	wool, pyrethrum	population growth with strong male dominance
12. Ln	forest area, commercial agr. and herding	wool, potatoes, pyrethrum	immigration but with a growing female dominance
13. Cl	livestock		in most of the area continuous female dominance
14. Lo	trad. irrig. subsistence agr.	some cotton	mostly continuous female dominance

TABLE 4 CONT.

Loc. nr.	Economy	Commercial products	Wage labour and male labour outmigration
15. Mw	subsist agric.	some bananas	growing extreme female dominance
16. We	trad. irrigated subsist. agric. small scale gold production and services (Sigor)	gold, (goats & skins)	continuous male dominance (recently asp. because of read works)
17. Ba	grazing area (schemes) and services (Ortum)	(some cattle)	inmigration, partly continuous female dominance
18. Ki	subsist. agr. and grazing area (schemes)	(some cattle and beans)	inmigration and continuous female dominance
19. Mn	commercially oriented agric. & services	maize, diary, beans, coffee, sunflower	wage labour concentration in Kapenguria and Makutano; very strong inmigration with a male dominance (colonization area)
20. Ri & 21. So	grazing area (schemes); semi-nomadic pastoralists	(cattle theft by 'ngorokos')	continuous female dominance (at census time) in most of the area
22. Se	agro-pastoralism with traditional irrigated agric. and irrigation scheme; small scale gold production	gold	strong inmigration
23. Ma	grazing areas nomadic pastoralism		population decline because of Turkana-Pokot strife; at census time female dominance
24. Su	nomadic pastoralism & goldprod.	gold (cattle theft by 'ngorokos')	(female dominance)
25. Kc	nomadic pastoralism & goldprod.	gold	probably strong inmigration (female dominance)
26. Ka	nomadic pastoralism, agro-past. & goldprod.	gold	probably strong inmigration (female dominance)
27. Al	agro-pastoralism & goldproduction	gold	probably strong inmigration (female dominance)

4. THE RESEARCH PROBLEM AND SOME HYPOTHESES ¹⁾

In our research the emphasis will be on the following main research questions:

1. What are the differences between locations and households in Elgeyo Marakwet and West Pokot in the extent and kind of market integration?
2. How did those differences develop since ca. 1900, given the existing ecological and socio-cultural differences?
3. What was the influence of various institutions on locational and household differentiation and especially what was the influence of government development efforts?
4. **What is the effect of market integration on changes within households?**

These research questions can be further specified. We distinguish background problems, the central problem (datacollection and interpretation) and related problems (datacollection and interpretation). At the end we will try to formulate some hypotheses.

Background problems

1. What are the differences between the 27 locations concerning the ecological situation: the climate (and the history of droughts and other climate disasters), the hydrology, the relief and the soil (and ecological degradation like denudation and erosion) and what agricultural possibilities and limits are posed by these ecological variables in the various locations?
2. What was the development of the number of people and their sex- and age-composition in the locations, between 1900 and 1982?
3. What were the main socio-cultural characteristics of the population of the district in ca.1900 (or: before actual colonial penetration)?
What was the locational and household variation in these characteristics?
And how did they change?

1) The main responsibility for the locational part of this research is with Ton Dietz and for the household part with Annemieke van Haastrecht.

(With socio-cultural we especially mean: the kind of various material consumer goods (housing, household utensils, clothing, food); the rights of ownership or usufruct and their socio-economic redistribution through gifts, feasts, dowry and fines; the age- and sex-specific division of labour, the importance of 'raids' to collect cattle and food and/or to kill enemies).

Central problem; datacollection.

4. What are in 1982 the differences between the population of the locations and between households within the locations concerning their participation in the wage labour market inside and outside the location; their participation in the marketing of agricultural products; their participation in the market for agricultural inputs and means of production (for instance the land market) and their participation in the market for consumer goods and services?
5. How did the differences, mentioned under 4., develop from 1900 until 1982, especially in the period 1950-1982?
6. What are - in 1982 - the differences between locations and households in the existence of or distance towards various institutions engaged in development efforts? And in the quality and quantity of the plans and of actual efforts?
7. What is the history of the planning and implementation of development efforts between 1900 and 1982?
8. What are the effects of market integration and of labour outmigration for tasks and decision making roles of the different members of a household?
9. Do labourmigrants remit part of their income? What is the level of these remittances and what are they used for?

Related problems; datacollection.

10. What is the history of the activities of government institutions (other than development efforts), of missions and church organizations, of private traders and private firms and of local initiatives?
11. How did the network of central places develop (service centres and market centres) and what is the existing hierarchy of central places?

Central problem; interpretation.

12. What is the correlation between the existence of development efforts and the extent and kind of market integration at the location and household level, in 1982 and in several other years?
13. What is the historical statistical relationship between various development efforts and various elements of market integration? (What came first? What time lag can be found? etc.)

Related problems; interpretation.

14. Are development efforts (plans, actual implementation, actual performance after some time) biased in favour of ecologically better areas and in favour of areas with a weaker culture of resistance and in favour of specific households?
15. What is the statistical and historical relationship between market integration and the reach of government policy (other than development efforts; for instance tax policy, the wages apant by the civil servants, etc.) and between market integration and the appearance and reach of missions/church organizations, private traders, private productive firms (especially in agriculture and mining) and local initiatives?
16. What is the relationship between the level and kind of market integration of a location and the level and kind of the central place(s) within and around the location?

17. What is the effect of the extent of infrastructural isolation (the quality and quantity of the road system and the real distance towards the main central places in the region) on the level and kind of market integration?
18. What is the value of the economic flows to and from the locations and what is the value of government projects compared with the money the government withdraws from the area?
19. Does a high level of product market integration and/or labour out-migration mean a low level of food selfsufficiency and hence a high risk of vulnerability to crisis (e.g. drought, political instability, lack of external food supply, etc.)?

Some hypotheses

We suggest that there is a direct correspondence between past development efforts and actual market integration. Product market integration and integration in the market for means of production will be found in areas where there was a variety of government efforts in the sphere of production during an extensive period of time.

Labourmarket integration within the area will be located almost exclusively in the main administrative centres (and in large enterprises of course). Labour outmigration can be found especially in areas with development efforts in the sphere of education and health and not in the sphere of production. Because of the fact that those services are especially provided by missions we also suggest that locations will develop into labour supply areas if there are only missions and hardly any state institutions operating. Consumer market integration will be located in the vicinity of administrative centres and of missions, if there are private traders settling there, in other words: if service centres are developing into market centres.

Market integration will be especially fast when a period of crisis (drought, cultural or political instability) is followed by a variety of development efforts. A combination of various efforts in the same location will have a strengthening effect on the continuity of market

integration after the 'projects' have gone. On the other hand we think that isolated government projects, when finished, do have a tendency to collapse almost immediately, while isolated local development initiatives and those by missions tend to last longer. However the effect of isolated and combined development efforts on market integration will be inversely related with the level of infrastructural isolation.

We suggest that government development efforts are extremely biased in favour of ecologically better areas (so not in the semi-arid parts of the districts) if the population of those areas did not pose political problems before. At least we think this to be true for the first (ten?) years of every 'hausa' in development assistance. After this period there is either a spread towards the marginal areas or the whole 'hausa' is over.

Besides we suggest that government efforts are biased to the male-headed (neglecting the female-headed) households, to the richer and more 'progressive' households, neglecting the poorer and subsistence agricultural ones and are biased to the ones close to centres and main roads. We think that labour migration, commercial agricultural production and food production for self-sufficiency could be positively related if 1) there is enough land, 2) the tasks of the migrants are taken over by casual labourers, 3) there is a variety of government programmes for agricultural development, and 4) the government does not withdraw many funds from the area as taxes. If one of these conditions is not met there could be a tendency of declining food self-sufficiency.

We suggest that increased market integration via commercialization of agriculture as well as by increased male outmigration as by increased formal education means an increase in tasks of women.

Increased commercialization of agriculture leads according to us to decreasing decision roles for women whereas increased male labour outmigration results in the opposite.

Finally we suggest that effects of male outmigration depend on the level of income and remittances of the migrant and on the composition of the

remaining household (because of formal education small children are both expensive and perform no household tasks, very small children need a lot of care, more wives and more other grown-ups can divide tasks, etc.). Also tasks which men performed before migrating determine the effect of his absence. Here the difference between tasks of men in irrigated, dryland agricultural and pastoral societies are of main importance.

We are aware of the fact that various types of market integration are not independent of each other. Also it is not self-evident that market integration is always the dependent variable.

A certain level of market integration can influence decisions by government and other change agents to plan development efforts that do influence market integration at their turn. Only careful historical analysis, looking especially at time sequences and time lags, can solve some of the methodical and theoretical pitfalls. This type of study can never produce full proofs of hypotheses; it can only make hypotheses more or less likely.

- IV. Archives and libraries of ministries, esp. the ministries of Agriculture and Livestock.
- V. Project Plans (the district information in the National Development Plan, the District Development Plans, the General Development Plan for the Kainji Valley etc., see e.g. KVM 1963, and 1966, Niger 1960) and provincial files (e.g. the FID).
- VI. Local 'archives' and book shelves:
 - government district annual reports, district budgets,
 - land register, tax register (until 1970),
 - NGO-archives, project files, market fee books,
 - missionary archives (maybe to be gathered in foreign missionary headquarters), secondary schools archives,
 - files of private companies (e.g. Flourishing Mining Company).
- VII. Census figures (for 1977 we probably need more detailed information, not provided in the Census Publication, maybe we can walk through the census files, see Hessel (1977) also for the 1960 census).

5. METHOD OF ANALYSES

5a. Locational differentiation

To find spatial coincidence and historical covariance of market integration and development efforts it is necessary to find and map all the data on the location level. To find the data, we can use various research methods:

- i. Maps (esp. 1:50,000), aerial photographs and landsat data.
- ii. Scientific literature, esp. on anthropology and physical geography (see list of literature, part B.).
- iii. National Archives: provincial and district annual reports, political record books, Handing Over Reports, Intelligence Reports and Miscellaneous Correspondence (see Gregory c.s. 1968; for Elgeyo Marakwet nobody studied the archives before as far as we know, for West Pokot Patterson (1969) did and we will have to check his data, for Karapokot we probably have to go to the Uganda Archives).
- iv. Archives and libraries of ministries, esp. the ministries of Agriculture and Livestock.
- v. Project Plans (the district information in the National Development Plans, the District Development Plans, the General Development Plan for the Kerio Valley etc., see e.g. KVDA 1981, ASAL 1980, Sigor 1980) and provincial files (e.g. the PIU).
- vi. Local 'archives' and book shelves:
 - government district annual reports, divisional reports,
 - land register, tax register (until 1970),
 - DDC-minutes, projectfiles, market tax books,
 - missionary archives (maybe to be gathered in foreign missionary headquarters), secondary schools archives,
 - files of private companies (e.g. Fluorspar Mining Company).
- vii. Census figures (for 1979 we probably need more detailed information, not provided in the Census Publication, maybe we can work through the census files, as Rempel (1977) did for the 1969 Census.

- viii. Interviews with district officers at various levels (from DC to JTA; chiefs and subchiefs).
- ix. Interviews with other key-informants:
 - MP's, members of County Council and members of DDC;
 - KVDA-, ASAL-, IADP- and other managers of government projects;
 - managers of private firms, shop owners and market supervisors;
 - cooperatives and marketing organizations;
 - missionaries and teachers.
- x. Group interviews: organizing discussions based upon our preliminary findings at the district and divisional levels.
- xi. Observations at market places, cattle auctions, barazaa.
- xii. Interviews at market places in some selected locations (to be done by local people, to be trained and paid) and interviews of labourers (e.g. Fluorspar Mining and KVDA-plot, Sigor) coming from the district.

In part of the locations we can check the information against the household interviews, see 5b.

We should be very systematic in the classification of the various development efforts. In the literature about development evaluation we found some valuable suggestions: e.g. in Birgegard's 'manual for the analysis of rural underdevelopment' (1980) and in Bates and Conants and Goldschmidt's articles in the reader 'The Future of Pastoral Peoples' (Galaty 1981). Here we present the main entrances of our datamatrix about development efforts:

1. The availability of land and water for various purposes.
2. The quality of land and water (especially for agriculture and livestock).
3. The improvement of crop husbandry.
4. The improvement of livestock husbandry.
5. The improvement of non-agricultural activities.
6. Changes in the availability and quality of the labour force.
7. Changes in the ownership, property-rights, use-rights and management of the means of production.
8. Changes in exchange relations; commercialization.
9. Changes in the provision of services and infrastructure.
10. Changes in income (level and composition) and consumption (level and composition).

5b. Household differences

Besides the method of research already discussed in the first part of this chapter for the research on the household level we need some additional methods.

- xiii. We will use results of other household surveys already done in the area (e.g. Meyerhoff 1978), although there is not much available.
- xiv. Some remarks in district reports may be of help.
- xv. Our own household interviews.

As there is not much known on household level in this area we thought it to be more useful to get a general picture of the various types of households in widespread selected areas of the two districts in stead of doing a large number of similar enquetes in one area.

For the selection of the households we will use the following criteria:

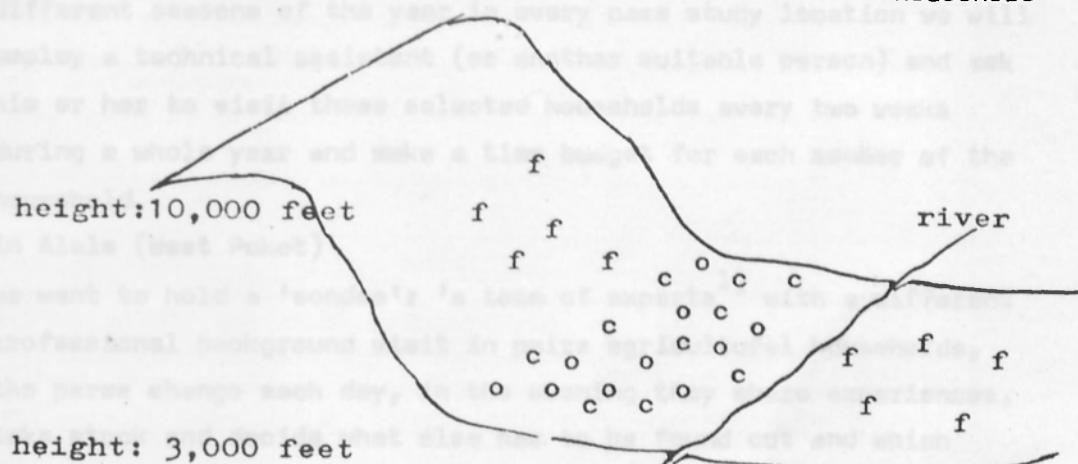
- absence or presence of market integration (a) by commercialization of different crops and animal products and b) by wage labour outmigration) in households.
- different types of agriculture (pastoral, agro-pastoral, dry-land and irrigation).
- different ecological potential.

As scores on each of the three criteria can be found together in one area, we hope to cover all the aspects of the criteria by selecting 8 locations. In each location we will select 10 typical households (with a high score on one of the criteria), and for checking purposes 10 neighbouring households with a low score on the variable and 10 households somewhat further away to check the influence of 'different ecological potential'.

(This could be called the method of the ecological transect).

Example:

c = typical cotton household
 o = other non-cotton neighbours
 f = further away non-cotton household



So far we have selected the following locations:

West Pokot	Mnagei	Commercial maize and beans	
	Lelan	Commercial woolsheep	
	Riwa	Ranching scheme	
Elgeyo	Endo	Commercial cotton	Male outmigration
Marakwet	Arror	Traditional irrigation	Male outmigration
	Soy/Metkei	Commercial milk	
	Mosop	Commercial vegetables	Male outmigration
	Sambirir	Traditional irrigation	

As a consequence of checking different variables in different groups of households, we will not use a uniform questionnaire for all households, but a checklist of questions and ask the ones relevant for the different households.

The checklist will contain the following subjects:

- the composition of the household;
- agricultural production both commercial and subsistence;
- agricultural and off-farm income;
- tasks;
- decisions;
- relations with government activities.

In these households we will make observations too, of the quality of houses and of household utensils.

xvi. As we are very much interested in changing of tasks during the different seasons of the year in every case study location we will employ a technical assistant (or another suitable person) and ask him or her to visit three selected households every two weeks during a whole year and make a time budget for each member of the household.

xvii. In Alale (West Pokot)

we want to hold a 'sondeo': 'a team of experts'¹⁾ with a different professional background visit in pairs agricultural households, the pairs change each day, in the evening they share experiences, take stock and decide what else has to be found out and which things have to be checked. A report is written over the weekend. This is not a benchmark study with quantifiable data...²⁾, but it seems to be a useful way to get much information in a short time. To us this seems a very suitable method for an area about which almost nothing is known.

1) and local key informants.

2) Chambers (1980, p. 7) quotes Hildebrand who developed this method in Latin America.

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