The development of the agricultural sector has been recognised after lengthy academic debate(1) as being crucial for a successful process of comprehensive economic development to take place. This seems self evident in Kenya, where the agricultural sector directly accounted for 41% of GNP and about 85% of total employment in 1966(2). In referring to agricultural development, writers have shown primary concern with physical increases in the volume of cash and food crops, increasing levels of efficiency in the utilisation of resources and introducing more advanced technology. It is argued that a vigorous policy of development of the sector is essential to:

1. Provide increased food supplies to a growing population where many incomes are rising and where relatively high income elasticities for food products are observed in order to inhibit internal inflationary pressures;
2. Expand the agricultural export sector which would supply needed foreign exchange;
3. Provide revenues, both private and public, to be used in the financing of further development, particularly in the non-agricultural sectors;

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The total labour force (male and female) is estimated by the Plan to be 3,200,000 of whom 454,000 are reported as non-agricultural employees (14.2% of the total labour force). In addition to the 329,000 persons listed in the monetary agricultural sector, it appears that the bulk of the remaining 2,757,000 persons in the labour force are engaged in the non-monetary agricultural sector. Thus, the total labour force engaged in agriculture can be crudely estimated at 2,756,500 persons or 86.2% of the total labour force.
(4) Provide increased incomes in the agricultural sector which would raise the level of welfare in the sector and concurrently provide an internal market for expanding domestic industry;

(a) release labour for growing industrial demand. (3)

The latter reason is now rarely mentioned as the experience in many countries indicates growing levels of unemployment and underemployment, often accompanied by impressive gains in production. In part this can be explained by rapid population growth which has occurred throughout the less developed world in the post-war period. But this is by no means the only cause - witness the increasingly common situation where absolute levels of employment (at least in non-agricultural sectors) decline or stagnate as GDP grows (4). In the case of Kenya, the level of reported employment in 1956 was 603,100, only 6,400 greater than 1956 levels; extension of coverage of reported employment in 1964 added some 44,200 employees to the total. More in evidence than reported employment has been the increase in the number of the unemployed, 1956-1966 (5). Unfortunately


Kenya Statistical Digest, op. cit., pp. 2-4.
the Kenya experience is representative of East Africa as a whole. The net effect of these circumstances is that the agricultural sector no longer needs to "release" labour, but rather has to "absorb" labour. Whether or not there is (or was) underemployment of labour (in the strict Lewis sense of the marginal product of labour being equal to zero) where agricultural output would not decline if people were moved out of agriculture and employed in the "modern" sector is no longer a relevant issue. The really important question now becomes how to effectively absorb the large increases in the agricultural labour force while expanding agricultural output. An extremely crude estimate, based on the 1962 10% sample census indicates that 500,000 - 600,000 males of employable age (15 yrs) between 1962 and 1967. Most of these people, presumably, are engaged in the agricultural sector. At least the same number of men will enter the employable age in both the 1968-1972 and 1973-1977 periods. It should be emphasized that these people are already born. Irrespective of how successful the economy is in meeting the employment goals of the current plan (6) there is a limit that severe social, political and economic strains will be increased, at least in the agricultural sector (7).

One cannot look at the historical experience of the presently developed countries as a guideline for future development in East Africa as input parameters of the two groups of countries are so radically different. Although in the early stages of development the agricultural sector has historically provided expanded output and employment opportunities, no developed country was ever called on to raise output and employment as rapidly or to the extent that seems necessary in today's developing economies which face severe and continuing population pressure (as well as a good many other difficulties).

Nor does "development theory" appear to have much to offer at present. The Lewis-Ranis-Reddell model(s), in part based on historical experience, is basically concerned with industrial growth in a "neo-classical" pattern which relegates the agricultural sector to a residual position (albeit one with many important functions on which the rest of the economy depends).


This writer is unaware of any other comprehensive development model that could serve as guidelines to development policy; certainly none that focus on the current problems planners face in the context outlined above.

That creative thought and experimentation are necessary to devise a new strategy (or set of strategies) for agricultural development appears obvious. Yet, basic information on actual conditions in agriculture which often serve as the foundation on which new strategies are developed, is generally unavailable. With reference to questions concerning agricultural labour, the data currently available for Kenya mainly consists of studies of labour inputs and labour productivity. A survey of wages and conditions of agricultural employment was conducted in 1955 but is now long outdated. A recent paper by J.D. Mackarthur, based on the results of the F.A.O., surveys, broadly discussed future employment prospects in agriculture while the annual reports of the Department of Labour (now published since 1963) give basic data on the relationships of labour supply-demand in the agricultural sector. In sum, this information, although often valuable, falls far short of providing the basic data on the operation of the agricultural sector which would be used in designing effective policies.

In an effort to narrow this "agricultural information gap" the writer is engaged in a study of the structure of the agricultural labour market and its factors influencing the supply and demand for labour. Three areas (Tana-Nacois, Kiiift and Kaba Districts) representative of different types of farming in Kenya have been selected for intensive study. Preliminary and incomplete results on the market structure in the large mixed farming sector (Tana-Nacois) are presented below.

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II Methodology

The Trans-Nzoia District, located in Rift Valley Province, is one of the most important mixed farming areas in the country. It covers a relatively small area of 955 square miles, all land in the district is classified as A1, high potential arable. In 1963 Trans-Nzoia accounted for 20% of total reported resident agricultural employment in Kenya. Other factors which led to the selection of this district for study are:

1. It is representative of the large mixed farming sector.
2. It is small enough to allow a reasonable sample of total farms to be studied.
3. Transportation facilities are relatively good.
4. The extension service, which has been working with most African farmers in the district for over a year, has maintained travel and record on farm operations which can be used as an independent check on the data obtained in the study.

Trans-Nzoia can be broken into three ecological zones:
1. A high potential region on the slopes of Mt. Elgon
2. A medium potential region in the Trans-Nzoia plains
3. A low potential region in the Cherangani Hills.

With the help of the District Agricultural Officer all farms were distributed by ecological zones. Once this was done a sample of 36 farms (18 European-18 African) in different size groups were selected for study by random sampling. The resulting sample accounts for 9.1% of the farms and 8.5% of the area in farms in the district (See Table 1)

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(11) In 1965 the district contained 47% of the total maize sorghum and 1.6% of the dairy herd recorded on all large farms in the country. Ministry of Economic Planning and Development, Statistics Division. Agricultural Census, 1965, Large Farm Areas, Nairobi, 1967, Tables 3a and 13a.

(12) Ibid., Table 33a
<table>
<thead>
<tr>
<th></th>
<th>Akkara Farm</th>
<th>Akkkara Farm</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 1000</td>
<td>2000 - 2999</td>
<td>2000 + Acres</td>
<td>Total</td>
</tr>
<tr>
<td>No. of farms in</td>
<td>163</td>
<td>43</td>
<td>12</td>
<td>218</td>
</tr>
<tr>
<td>District</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of farms in</td>
<td>26</td>
<td>17</td>
<td>1</td>
<td>44</td>
</tr>
<tr>
<td>sample area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of farms in</td>
<td>11</td>
<td>7</td>
<td>-</td>
<td>18</td>
</tr>
<tr>
<td>sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farms in sample 10</td>
<td>11.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of farms in District</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average level of</td>
<td>23</td>
<td>24</td>
<td>-</td>
<td>47</td>
</tr>
<tr>
<td>employment on sample farms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An employer questionnaire was administered to all 36 farm operators (owners or managers) by the writer. Concurrently, 4 research assistants conducted in-depth interviews with 993 farm workers on 8 European and 8 African farms. Selection of farms for employee interviews was based on size group and proximity to major roads. On those farms where employees were not interviewed, information on type, wage, length of employment, etc., was provided by the employer for each of 758 employees. All interviewing took place between June and August of 1967.

III Market Structure

One could conceive of a spectrum of market structures ranging from the perfectly competitive model to perfect monopoly-monopsony conditions (where the union represented the sole seller and an employer's controlling the sole source of labour). In the case of the labour market in this study, it is obvious that there were conditions not observed. When coupled to an examination of the extent to which the employer felt that the union reduced competitive conditions in Section 5(a), it forms that imperfections take.

The conditions for a perfect labour market are given below; each will be discussed in turn:

1. A large number of small employers in the industry.
2. Freedom of entry and exit into the industry.
3. Absence of collusion among employers.
4. Production of a homogeneous product (or small number of homogeneous products).
5. A large number of homogeneous employees.
6. Absence of collusion among employees.
7. A high degree of horizontal mobility of labour between employers in the industry.
8. A high degree of horizontal mobility of labour between all industries.
9. Perfect knowledge of all costs, revenue and opportunities on both sides of the market.
10. Rational behaviour by both employers and employees.
11. Diminishing returns to all factors of production.
13. To the extent possible, the entire labour force was interviewed on each farm selected for employer interviews. Originally, 33% of the total farms in the sample were to have such interviews. However, on the average size of the labour force on African farms in the sample is only 25 as compared with 42 on European farms, interviews were conducted on 50% of the African farms in the sample. 226 employees were interviewed on African farms whereas only 127 employees were interviewed on African farms, despite increased coverage of the latter.
It should be noted that all numerical data presented are preliminary tabulations and should be viewed as describing orders of magnitude rather than precise results.

A Large Number of Small Employers

Previous to this study there was no data available on employment by size of farm. In 1969, the last year for which data is available, resident agricultural employment in the district was given as 7,800. In that year there were 347 farms listed in the Census, giving an average of 22 workers per farm (13). As is seen in Table I, no farm group in the sample had average resident employment of more than 50 per farm. No individual farm employed more than 100 workers. Assuming that the total level of agricultural employment has not changed significantly since 1969, and that the sample is more or less representative of the district, the condition that there is a large number of small employers appears to be satisfied.

Finance of Entry into Land

At this moment there are no formal barriers to entry into large scale farming in the district. The proposal to restrict all future land sales to Kenyan citizens will probably have the effect of significantly altering the land market, as many Europeans who may wish to purchase land are unwilling to forego Kenyan citizenship.

The Land Bank and the Agricultural Finance Corporation, the principal agencies involved in the provision of credit for land, cattle and machinery purchases, have a policy of only serving non-African large scale farmers. This policy appears to have an element of African envy. However, almost half of the European farms in the sample have been purchased since 1966 (see Table II) and it appears that in the past few years there have been no real barriers to entry. There are no restrictions on entry.

Table II. Purchase of Farms in Trans-Nzoia District

<table>
<thead>
<tr>
<th>Year of Purchase</th>
<th>African No.</th>
<th>European No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>1968</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>1969</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>1970</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>1971</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>1972</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1973</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1974</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

(13:1) Agricultural Census 1969 see also, Tables 1 and 13
Collusion Among Employers

Most farm operators in the district belong to one or more farm organisations (i.e., Kenya Farmers' Association, the Agricultural Society of Kenya, Kenya National Farmers Union - KENFU), but only the KENFU and its independent subsidiary, the Agricultural Employers Association, deal with labour questions. The Trans-Nzoia KENFU branch has a standing committee which is responsible for labour problems but who disputes are sent to Nakuru where they are handled by the National Office. Labour questions are discussed at annual meetings or special meetings which are referred to as urgent questions (14). Decisions taken at such meetings are not binding on members.

The Agricultural Employers Association (AEA) is a recent outgrowth of the National KENFU Labour committee. This association deals directly with the Agricultural and Plantation Workers Union and negotiated wage agreements. AEA membership is small and its activities are not taken seriously by the AEA.

KENFU claims a membership of 200,000 farmers in the country who have recently joined the organisation. Of the 36 employers interviewed, 7 Africans and 11 Europeans (50%) claimed KENFU membership. Most of those interviewed said that they had not been to any meetings where labour problems were discussed. Of the interviewed claimed membership in the AEA. On the basis of this information it appears that there is no formal organised collusion among employers.

Sixteen employers (45%) said that they internally discussed labour problems with other farmers. The most frequently mentioned topics of discussion were local wage rates for casual labour (8 employers) and identification of 'receivable farmers' (6 employers). When local wage rates for casual labour range between 3/-/day and 5/-/day, any attempt at informal collusion among employers is obviously ineffective (15).

(14) The local KENFU labour committee chairman said that the last special meeting held on labour problems was about two years ago when the tripartite agreement was discussed. This was an agreement between employers, unions and the government whereby private employers voluntarily increased employment by 10%.

(15) The average daily rate of casual labour is 1/-/day.
Homogenous Products

In analyzing the labour market in agriculture it is important to see the extent to which homogenous activities influence labour requirements. All farms in the sample are primarily concerned with the production of rice and dairy products. In addition, coffee and tea are grown as subsidiary crops on most farms (20 households and 15 coffee producers). Of these two commodities, the only one that calls for any degree of labour specialization is dairy farming. In this case, it is only laborers who work where there is a critical need. There are no restrictions in entering daily employment on the basis of tribe (see Table III). To a large degree, all four activities are homogenous with respect to the degree of labour specialization required, and employment opportunities do not appear to be determined by ethnic or caste position.

Homogenous Labour Supply

The majority of the labour force is unskilled and has little formal education (16). Although the district is in a predominantly Luhya-Kalenjin area, about half of the labour force is composed of tribes from other areas (see Table III). The majority of jobs (73%) require little, if any, skill.

These workers who are in skilled or administrative and supervisory positions (27%) do not appear to possess any special characteristics other than grosser educational qualifications or previous experience and training (i.e., tractor drivers). Skills are most often acquired on the farm by individuals selected by the operator for training. Most headmen are selected on their ability to effect the exert authority and organize workers. The only qualification for clerical positions is literacy (i.e., a minimum of 4 to 5 years of primary education).

Thus, the labour force can be divided into unskilled (categories III and IV) and skilled (categories I and II) workers. General characteristics (tribe, age, education level, etc.) of employees in both groups are basically similar and there is a degree of upward vertical mobility from unskilled to skilled positions.

Collusion Among Employees

There is no strong agricultural labour organization functioning in the district. The Agricultural and Plantation Workers Union has an office in Kittole (the major town in the district) and claims a dues paying membership of 600 workers. The Union entrance fee is 3/-

(16) Preliminary tabulations indicate the average level of education on all farms in the sample is less than 1 year.
### Table III

Occupational Distribution of the Sample Labour Force by Tribe

<table>
<thead>
<tr>
<th>Skill Classification</th>
<th>Luo</th>
<th>Kilwea</th>
<th>Likeya</th>
<th>Kirebe</th>
<th>K_longjin</th>
<th>Burikmo</th>
<th>Other</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Administrative and supervisory</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>1</td>
<td>2</td>
<td>-</td>
<td>3</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td>II Skilled workers (drivers and artisans)</td>
<td>4</td>
<td>39</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>19</td>
<td>41</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>III Semi-skilled workers (daily employment and apprentices)</td>
<td>1</td>
<td>34</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>29</td>
<td>89</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>IV Unskilled workers</td>
<td>8</td>
<td>21</td>
<td>25</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>42</td>
<td>196</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>45</td>
<td>109</td>
<td>15</td>
<td>20</td>
<td>16</td>
<td>93</td>
<td>393</td>
<td>100</td>
</tr>
</tbody>
</table>
and dues are 2/- per month, quite high relative to wage levels (about 9/- = 45/- per month on cash).

Of 393 employees interviewed, 112 employees on European farms and 1 employee on African farms claimed to be union members. Most employers stated that union representatives had never attempted to organize their farms. On those farms where organizing meetings were held, employers claimed that union members were collected union representatives did not return to the farm or made no serious attempt to enroll. No employer said that the presence of the union had brought about any changes in labour relations.

Inquiries were represented by the district labour officer who said that most union officials were underpaid, inefficient and had low motivation. He went on to suggest that most workers preferred to go to the local K.A.N.U. office with their complaints. K.A.N.U. workers were more effective in dealing with employers and aid the workers without charge. (17) (18)

In no case did the union have a representative on the farm or bargain directly with the employer. It appears that the union has had no impact in either obtaining better conditions or higher wages for its farm member employees. From the above it is obvious that agricultural workers on a group are unorganized.

However, a separate form of collusion does seem to exist between African employers and employees. On African farms 60% of the labour force is of the same tribe as the employer or husband, as compared to 23% on European farms. These figures strongly suggest that African operators prefer employees of their own tribe. The extent to which the labour force previously on the farm was discharged and replaced by new arrivals of the African operators whilst will be investigated in the near future.

High Mobility Within the Industry

In a perfect market one would expect a high level of horizontal mobility coupled with a high degree of accurate knowledge about the market on the part of employees to lead towards a situation where...

(17) Before a union representative will investigate a worker's complaints the worker must be a paid up member of the union and in addition pay transport costs (30-40) of the representative to the farm.

(18) The local K.A.N.U. representative claimed an average of 50 employee complaints per week. Most disputes were said to concern discharge without proper notice and non-payment of wages (predominantly on African operated farms).
Table IV

|        | 1st  | 2nd  | 3rd  | 4th  | 5th  | 6th  | 7th  | 8th  | 9th  | 10th | 11th | 12th | 13th | 14th | 15th | 16th | 17th | 18th | 19th | 20th | Total |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Senior | 6.1  | 6.7  | 8.1  | 9.2  | 7.2  | 3.0  | 2.1  | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 254.0 |
| Junior | 5.8  | 5.8  | 6.5  | 8.5  | 6.5  | 16.5 | 10.0 | 14.0 | 5.7  | 4.3  | 110.0|
| Senior | 7.2  | 7.2  | 6.5  | 7.2  | 6.5  | 16.5 | 10.0 | 14.0 | 5.7  | 4.3  | 110.0|
| Junior | 7.2  | 7.2  | 6.5  | 7.2  | 6.5  | 16.5 | 10.0 | 14.0 | 5.7  | 4.3  | 110.0|

Note: Length of Service at Present Employment in weeks.
they have not always been able to find paying jobs within the district.
In the event that the "hinterland" or "exterior" areas in homogeneous, similar conditions will be expected to occur between industries in favour of the highest paying industry.

The extent to which these industries employ the poor is not clear. The lower paid industries employ a higher proportion of the population. (19) However, this analysis is not a complete picture of the extent of employment, since industries that are less successful in attracting workers may not report on their current position, i.e., they may have held a lower proportion for less than one year and a high proportion of 15.5% have been employed in their current jobs for more than three years. This may indicate a high level of voluntary labor mobility. It could also mean that there is a high rate of turnover due to a number of other causes (e.g., because some people prefer a rotation of short-term employment periods and periods at home, because people are called home for various reasons, because there are a number of "unemployables" who can't hold their jobs, etc. Another important factor to be considered is that African employees who have only taken over from the previous years, are most likely replacing and/or expanding their "job market" in which one would expect the length of residence to be fairly low. On the other hand, the relatively shorter period of residence on African is compared to European farms, pronounced in all cases of residence in that these years may be representative of horizontal mobility and less secure African employment (from the point of view of the employer) in favor of European employment possibilities.

As a general phenomenon, one would not expect too high a level of horizontal mobility as (a) there is a high level of unemployment in the district, (20) and one would not expect workers to leave their relatively low paying jobs when the possibility of finding higher paid employment opportunities is low (b) employer information about actual conditions in the labor market is poor (see below) and (c) most workers consider the farms their home (21). All factors considered, evidence on the degree of horizontal mobility is limited and difficult to measure.

(19) No figures on unemployment in the district are available, but all local government officials state that the writer spoke with several that there was "not much" unemployment in the area. These statements were supported by employers who said that at no time in recent years did they ever face a shortage of labor.

(20) Of 353 employees asked of their future expectations 267 (75%) said they had no further plans and hoped that they would be able to stay on the farms where they were currently employed.
Horizontal mobility within the industry does not allow one to draw any firm conclusions at this time.

Mobility Between Industries

Statistically, urban employment offers higher wages than agricultural employment in the same region. Mechanical milking equipment, for example, is in use at some farms. However, a survey by government agricultural workers showed that workers of all wage levels are in fact better paid than those working on the farms. However, there are certain specific factors which may affect the pattern of employment, such as the knowledge of the farmer or the localities, and this may influence the decision of the farmers to move to urban areas.

The only tabulated evidence on urban migration shows that about 50% of the labour force on both African and European farms, have sought employment in urban areas in the past. The average number of trips per employee is about 2, ranging from a low of 1 to a high of 6. This information indicates a strong tendency toward inter-industry horizontal mobility in favour of higher paying industries, but little more can be said without further analysis.

Imperfect Knowledge

Imperfect knowledge exists on a number of levels on the part of both employers and employees. Only 10 (7 European and 3 African) farmers run most of their operations, while some of the employees have seen more than one employer (i.e., mechanical milking vs. hand milking, tractor vs. all manual, purchase of additional tractors, etc.). Some employers stated that most operations could not be mechanized while others felt they could not afford to do the job properly. There is an experimental farm in the district, but no costs have been made on our operations. The men in the study by the Farm Economics Survey that conducted the district.

Other areas of imperfect knowledge on the part of employers include:

1. Poor understanding of minimum wage legislation (discussed below) and poor information on local casual wage rates (see above).

At this time, there are only incomplete tabulations regarding the amount of accurate knowledge about the current labour market in the disposal of the employee. The value of the wage paid to most unskilled employees is about 50-50 per month, including the value of sickness and absence relief. An incomplete tabulation shows that most workers have an idea of local wage rates or believe that the value of wages is much lower than it actually is (see Table V). However, it seems most reasonable to assume that those who did report salaries that the question referred to

(22) 120 out of a labour force of 254 have sought employment in urban areas; 54 out of a labour force of 170 and 46 out of a labour force of 154 on European and African farms respectively.
each wage only, and if this is taken into account, the majority of workers
believe that the wage they are currently receiving is in the correct range (i.e. a cash wage of 30 - 40/-
for African farms and 40 - 50/- on European farms). It also appears that most workers believe that the wage they currently receive is in the correct market wage for unskilled labour. This is not true, as wages on African farms are usually about 30/- per month lower than wages on European farms. In general, workers are aware that there is a high level of unemployment in the district.

The preliminary findings show that the employees in the survey have relatively good access to information on the local labour market. As these employees are most often on farms which are only 3-5 miles from little, one could assume that market information in the hands of employees residing on outlying farms in the district is probably even less accurate.

Rational Behaviour

It will be necessary to examine the extent to which employees of employees exhibit "rational" behaviour patterns. In this study rationality will be judged by behaviour patterns or attitudes which lead to long run income maximizing decisions. This of course does not mean that other behaviour patterns are not rational in the more common sense of the word. According to this criterion, an employee who refuses temporary employment at higher pay in preference to lower paid permanent employment would be behaving rationaly.

As this time the only tabulated data which give an indication of income maximizing behaviour on the part of employees shows that out of a labour force of 393, 15 employees (4%) actually seek supplementary part-time employment and an additional 11 employees (3%) would seek part-time employment if they thought that such opportunities were available. This information, in itself, does not allow one to draw any firm conclusions.
In the absence of information on the minimum wage, the respondents by asking the higher wages were a measure for good work (or the part of individuals or the farm labour force as a whole) or expressed the belief that higher wages stimulated labour productivity. These responses are consistent with income maximizing behavior, but, in the case of employment, no firm conclusions can be drawn without further analysis.

**Diminishing Returns**

Although the writer is aware, there is no evidence to contradict the assumption of diminishing returns to all inputs in agriculture.

**Absence of Government Intervention**

The major influence of government on the agricultural labour market is through the imposition of the minimum wage for monthly (5/- per month) and daily employees (6/- per month). However, the provisions of the law are not fully understood by most employers. The law allows the employee to deduct up to 25/- per month for workers only two of the employees interviewed received this. Employers were aware that they can deduct the 'value' of items, but the amount has been calculated to value items (new market or fair price) (23). The law allows a further deduction of 5/- per month, but is ignored completely, up to a maximum deduction of 25/- per month. A number of employers think the maximum deduction is 5/- per month and/or that no worker should be paid more than one 5/- wage. The resulting confusion has led to a situation where employers are paying their workers less than the legal minimum of the minimum wage, although a majority of employers (in rural areas) are paying above the minimum wage. Employers who are paying above the minimum wage believe that they are in fact paying no more than the minimum or less. (24)

The District Labour office does not pursue a vigorous policy of enforcement with respect to the minimum wage, nor is it necessary on the frequency of farms. As none of the non-African farms have any employees on wages, there is no reason to be concerned with the enforcement of the law. Such employees are paid in cash, but in a delayed fashion - once. Such workers have a better deal in the day when another the daily hand the wages are bringing in sufficient revenues to meet both low payments and wage obligations. The actual number of

(23) Of the employees value their wages at 5/- per month. It is interesting to note that the District Labour Officer was also unsure of the law and said he considers the amount to be 5/- per month. He then said they do not expect the workers to be paid 5/- per month, but that the local market value of items is only 25/- per month. A check on local market prices revealed that given the minimal farm employers issued in their employees, the mean market value was closer to 5/- 20/- per month.

(24) Of course, all employers knowingly pay their skilled workers more than the minimum wage.
formal complaints by workers is quite small, partly due to the fact that with so much unemployment in the district, the worker does not feel he is likely to lose his job if he registers a complaint against his employer. (25).

The impact of minimum wage legislation has been to raise the hourly agricultural wage to a level that is in fact higher than originally conceived by the framers of the law. It is particularly effective on European farms where (a) employers can afford to pay higher wages, and (b) there is fear of breaking the law. The effect of the current level of wages on employment will be examined in the future.

IV Evaluation of the Market Structure

Given the evidence available at this time, it appears that the structure of the labour market in the Tweeddale collection is characterized by the absence of features necessary for the functioning of a perfect labour market. (26)

However, as the degree to which mobility and imperfect quality of information are characteristics of the present operation of the market, the self-regulating adjustment mechanisms of the worker, which would lead to equal rates of pay on all farms, are inhibited.

Minimum wage regulation by the Government (to the extent that it is effective) probably creates a higher level of unemployment than would otherwise prevail as the "market wage" for labour is kept artificially high and unemployed workers are not in a position to bid down the wage and thereby increase the level of employment. (27). The impact of a lower wage level on employment cannot be evaluated unless one considers the elasticity of demand for labour with respect to the wage rate. Employers were asked what their response would be to a fall in the minimum wage from £60/- to £50/-. Only 6 out of 36 employers said that they would increase the size of their labour force (5 African and 1 European employer), the total estimated increase being 28 employees (i.e. an increase of 7.5% on the base labour force of 366). Clearly the demand for labour with respect to the wage is inelastic, the elasticity coefficient being .35.

(26) Large numbers of unorganized sellers and buyers, no restrictions on entry, homogenous products, rationality, and diminishing returns.

(27) This is not always true as indicated above. Some farmers report that a number of workers offer their services for contract work (e.g. pit-sawing, brickmaking, clearing bush, etc), where payments are based on the task, these workers are often willing to accept task rates that would work out at less than minimum wage rates if the task were to be done on a "time" (i.e. weekly) basis.

(28) In fact the labour officer reported last year of unemployment often means a worker is made to feel he is a partner on the farm, rather than an employee, as the former are not subject to minimum wage legislation. This activity is the part of the employee is quite understandable as most workers regard the farm as their own or else as their source of employment.
The fact that European and African farmers exhibit different behaviour patterns (e.g. groups) that influence the operation of the market. These patterns may be attributed to different economic positions, cultural differences, etc. The importance of these differences will be evaluated at a later stage in the analysis.

Finally, it may be more correct to divide the analysis into separate investigations of skilled and unskilled labour markets, as labour in these two categories is not homogeneous.

It is left to the reader to decide where the competitive non-competitive market appears the Trans-Mosaic market falls.

7 Possible Answers in the Market and their Implications on Employment

As noted above, African farmers currently enjoy advantages in the form of entry whereas a number of Europeans may need to be excluded from entry. Should this trend continue, which seems likely, there will be two opposing effects on employment. On the one hand, African farms appear to have an labour intensive production function that European farms and a shift in control should increase employment opportunities. Preliminary calculations indicate that on African farms the number of cultivated cores per field worker is 19.6 as compared to 30.6 on European farms in both cases the level of labour intensity is higher, the smaller the unit (see Table VI). African farms are also more labour intensive in dairy production, with an average of 22.8 livestock units per livestock worker as compared to 35.7 on European farms. A further indication of a low intensive production function on African farms is seen by the fact that on African farms total acres per tractor is 553, as opposed to 456 on European farms.

On the other hand, European farms are more developed and therefore exercise a greater demand for labour. As is seen in Table VI, the percentage of cultivated acreage is significantly higher and the number of cultivated acres per livestock unit significantly lower on European farms in all three groups. This indicates a much higher level of land utilisation as compared to African farms. Few of us assume that low African farmers will be able to maintain the level of production formerly provided on the farm, which is doubtful, the effect of land transfers on

(28) African farmers are possibly under the constraint of a heavy debt burden and have not yet the time to develop their farms to the amount of European farmers (see Table VII).

(29) Although African farms are smaller than European farms in all three groups at present, there is no reason to assume that future transfers of land from European to African operators would involve smaller farms only. However, if this were the case, the employment creating effects would be relatively greater.

(30) Clough is also in the process of estimating production functions on African farms in the Trans-Mosaic.
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(1) includes part-time working as the unit full time
employment is intermittent at this time. 

The present situation does not appear to be any shortage of either skilled or unskilled labour. If there were a shortage of skilled labour in the mines, so the unions that skilled and unskilled labour are complementary inputs and there are no substitutes for skilled labour inputs, one would expect total production and total employment to fall until new skilled workers could be trained. However, the possibility exists that this is not the case.

A second possibility is that conditions in some part of employment coupled with increased horizontal mobility would lead to a situation where wages were more skilled and unskilled workers could be earned equally on all farms. Given (a) the present degree of isolation of farms and individual farms, (b) the situation where most farmers consider their farms as the focus on which they are working, and (c) the lack of any programme to change these conditions, it is difficult to foresee any change from the present situation.

Since we require listings for employers' sake, it is worth noting that employment decisions on the results of such earnings. If increased earnings indicated that employer intensive methods were cheaper, there would be a tendency toward cost minimisation unless the government provided a subsidy to increased employment, e.g. for use of the labour intensive methods, which outweighed the marginal costs arising from the use of the new capital intensive techniques. It is also quite possible that labour intensive techniques would be found more profitable, particularly when the marginal benefits of closer supervision are investigated. Wages might also indicate the lack of management skills from crucial bottleneck to expanded employment; programmes designed to improve such deficiencies could increase employment opportunities.

Finally there is the possibility that the wages of labour could rise, despite increasing employment, through an increase in the minimum wage. Of 30 employers asked, 10 said they thought would arise from a general wage increase of 10% or more. Of 7 (3 Africans, 3 Europeans) felt that there would be an increase in output that would be sustained. In response to a similar question regarding a rise in labour costs 12 out of 30 (6 Africans, 6 Europeans) employers agreed that there would seriously attempt to increase the level of mechanisation on their farms if costs rose in the future. No information is available at this time on the probable impact on employment of a rise in the minimum wage. (31)

(31) The latter refers to wages and to calculate the availability of capital, capital costs on a large labour force; improvements in labour productivity on African farms; to increase the level of mechanisation on African farms, particularly when the state burden is eased, etc.

(32) State policy thus makes no attempt to calculate the availability of labour, capital costs on a large labour force; improvements in labour productivity on African farms; to increase the level of mechanisation on African farms, particularly when the state burden is eased, etc.
As a general attitude, entrepreneurial farmers, particularly Europeans, do not appear to be overly concerned about the prospect of an increase in the minimum wage (which could possibly be easily financed out of profits). In part this attitude appears to stem from a feeling of responsibility towards their labour force. African farmers, in such "tighter" economic positions, are quite concerned about the possibility of increasing labour costs. It is likely that a rise in the minimum wage, accompanied by filling living prices, would probably bring about a decrease in production and employment on all farms in the district and might well stimulate the introduction of machines designed to decrease the size of the labour force and increase labour productivity of the remaining workers.
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