The "Success Story" of Peasant Tobacco Production in Tanzania

Jannik Boesen
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The political economy of a commodity producing peasantry

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Published by
Scandinavian Institute of African Studies, Uppsala 1979
Publications from the Centre for Development Research, Copenhagen


This series contains books written by researchers at the Centre for Development Research, Copenhagen. It is published by the Scandinavian Institute of African Studies, Uppsala, in co-operation with the Centre for Development Research with support from the Danish International Development Agency (Danida).

Cover picture and photo on page 116 by Jesper Kirknæs, other photos by Jannik Boesen.

Village maps measured and drafted by Jannik Boesen and drawn by Gyda Andersen, who also did the other drawings.

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ISSN 0348.5676
ISBN 91-7106-163-0

Printed in Sweden by
Offsetcenter ab, Uppsala 1979
This book is the result of a research project undertaken jointly by the Research Section of the Tanzania Rural Development Bank (TRDB) and the Danish Centre for Development Research (CDR).

The research work was carried out between 1976 and 1978 by A.T. Mohele of the TRDB and Jannik Boesen of the CDR. Contemporary and historical information was collected from:

(a) existing statistics and other written materials from a variety of sources, published as well as unpublished, notably from the offices and files of TRDB (Dar es Salaam and regional offices), the Tobacco Authority of Tanzania (TAT–Morogoro and regional offices), and the now defunct cooperatives in the tobacco areas.

(b) Discussions with officials of the above mentioned institutions as well as of the regional and district authorities.

(c) A questionnaire survey of a sample of tobacco producing households in Tabora and Mbeya Regions.

(d) In-depth village studies of four selected tobacco villages in Tabora Region.

As data collection and analysis progressed, they were presented to the TRDB and CDR in preliminary reports by the present authors. On the basis of these reports, and the ensuing discussions of them within TRDB and CDR, we worked out the detailed outline of this volume. Because of A.T. Mohele's many other work commitments within the TRDB, it was decided, however, that Jannik Boesen would undertake to do the actual write-up of the manuscript, into which Mohele's comments have subsequently been incorporated.

The CDR participated in the project under the auspices of the Danish Research Council for Development Research, through which the Danish International Development Agency (DANIDA) provided funding for the CDR participation as well as for the publication of this book.

Apart from A.T. Mohele, numerous other Tanzanians have helpfully contributed to this study. Special mention is due to TRDB staff members in Tabora and Mbeya Regions, Messrs. Makene, Pallangyo, Ghawoga, and Kapongo, and Miss A. Abdallah, who did the interviewing for the sample survey and provided us with plenty of important information. Throughout our work we have appreciated the unfailing support from the former
general manager of TRDB, Mr. Z.D. Maginga, and his head office staff. Last but not least, the study would of course have been impossible without the cheerful cooperation we received from the people in the villages of Tabora and Mbeya Regions.

While so many people and institutions have contributed, they have – naturally – not interfered in our analysis and reporting of the results, i.e. the present book, which is therefore entirely the responsibility of the authors.

Dar es Salaam and Copenhagen, April 1979.

A.T. Mohele and Jannik Boesen
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CHAPTER I

Introduction

The smoker in Copenhagen smokes some of the most expensive cigarettes in the world (though apart from the price they are in no way different from everywhere else). But whenever she lights one of her almost one-T.sh.-a-piece cigarettes the Tanzanian (or Brazilian or Malawian) peasant tobacco producer earns less than one cent (1 T.sh. = 100 cents).

The Danish worker who produces the cigarettes from imported tobacco does not get much more per cigarette. She alone, though, handles the equivalent of the whole produce of some 50 third world peasant producers, thus earning the same as they do together.

By and large, however, the remuneration of the direct producers clearly exerts very little influence on the price of the end product. There are others, who have much greater stakes in the world-wide addiction to smoking. Foremost among those are the states, whose revenue almost everywhere amounts to more than 50% of the consumer prices on cigarettes (85% in Copenhagen). Their hypocritic concern with health effects of smoking, which often justifies new tax-increases, is demonstrated by the fact that taxes are hardly ever increased just enough to actually cause a reduction in their tobacco revenues—let alone in the profits of their principal business partners in the trade, the giant transnational tobacco conglomerates. With interests reaching all the way from production schemes in many Third World countries to such supplementaries as cigarette retailing, advertising, cigarette making machinery and packing materials, and maritime transport lines, their world-wide oligopoly forms the second pillar on which rests solidly the ever increasing world tobacco consumption and production.

When such powerful interests as those of states all over the world together with a major oligopoly of transnational corporations are involved—and generally well accomodated with each other—it is hardly surprising that direct producer and consumer interests seem to be pushed back into second rank, and may find it difficult to exert themselves even by means of simple supply-demand mechanisms.

Even if the joint intervention of states and transnationals may appear efficiently to make supply and demand meet (in a steady upward trend) to the benefit of all, this should not hide the fact that it is achieved by direct manipulation of both the supply and the demand side through extra-economic means.

Thus state and corporate tobacco revenues are kept growing by a

1 Footnotes at end of each chapter.
combination of mass-advertising, monopolistic market stabilization and pricing, and state abstention from anything but the most feeble measures to curb mass-addiction to tobacco on the one side, and effective control over both producer prices and production processes of ever increasing numbers of petty producers throughout the world on the other side.

This is not of course to postulate that primary producers and consumers necessarily have common interests between or among themselves nor that there are no antagonisms between states and transnationals. But producer and consumer interests hardly ever confront each other in their common subjection, at their respective ends of the chain, to state and corporate dominance. And states and transnationals usually fight it out within the acknowledged framework of mutual dependency, the detailed outcome varying from case to case, depending on the specific economic and political power line-up in each case. In general, however, the isolated states of the underdeveloped countries are in the weaker position vis-à-vis the giant transnationals, while these countries together count for more than half of the total world export of unmanufactured tobacco.

Nor is such a situation unique for tobacco among the raw materials primarily exported from underdeveloped to industrialized countries.

Tobacco does, however, have certain characteristics which makes it, perhaps, an extreme case of a general tendency. The prohibitively high capital intensity of cigarette manufacturing and marketing makes it difficult but impossible for any newcomer to intrude into the international cigarette oligopoly, which is the heart of the whole business (thus i.e. effectively barring most Third World countries from the export market for the manufactured product). At the other end tobacco production technology has so far allowed small-scale peasant producers to remain competitive with large farms or estates, provided an elaborate coordinated marketing, distribution, and credit network, necessary for the very input intensive tobacco production, is established. A precondition that almost automatically invites efforts to monopolize control over the producers, be it by the state or directly by a tobacco transnational.

Such is the setting and the main actors of the present volume which studies how Tanzania in the last 25–30 years has become a tobacco producer and a tobacco exporter. But its emphasis is on production, and therefore on the producers. We shall analyse the processes that – still – make more and more Tanzanians into peasant producers of tobacco for the international market. The dynamics of the organization of production under changing conditions of production. The effects on the development of productive forces, reproduction processes and the standard of living (level of reproduction) among the peasant producers.
As we have already indicated above the Tanzanian peasants are, however, part of a very definite world-wide scenario, which must be included in the study in order to understand all the different forces and interests, that are involved in shaping their conditions of production. This we have tried to do, to the extent necessary, though it should be re-emphasized that the stress in our own research has been on the direct producers, their interests, and their immediate relations with other parts of the tobacco economy – for the rest of which we have relied more on secondary sources.

Although we think that the general course of development as described in the book can be explained by the forces and interests involved (e.g. the world market, the transnational tobacco conglomerates, the colonial and post colonial states, the petty commodity production character of peasant tobacco production) we do not subscribe to a deterministic or hegemonistic interpretation. So throughout the volume there are indications of possible, concrete changes in present development trends, that might be effectuated in the common interest of both peasants and at least part of the Tanzanian national set-up, or even through concessions to more or less organized pressure from the direct producers alone. It also implies, on the other hand, a disbelief in purely "neutral" technocratic measures, and an understanding of Tanzania as a society where different classes have different interests and where the peasants, therefore, are struggling and have to struggle to defend their legitimate interests and against exploitation even from within the country itself, despite its officially proclaimed socialist inclinations – or perhaps rather in defence of these.

Tobacco is today grown as a commercial crop in large parts of central Tanzania. The tobacco areas coincide roughly with the vast tracts of "Miombo" forest stretching from Tabora Region over Mbeya and Iringa to Ruwuma Region in the South (See Map 1).

Tobacco is a crop that is well suited for the natural conditions in this area, and which in this respect has hardly any competition from other commercial crops.

The climate is semi-dry with one continuous rainy season of 5-7 months, yielding 600–1000 mm per year and hardly any rain at all in the remaining dry months. The soil is generally sandy and poor in nutrients, which is, however, something of an advantage in tobacco growing, as it allows the precise regulation of nutrient levels through fertilizer application that is necessary to achieve the demanded quality especially of the most common variety, the fire-cured virginia tobacco. Finally the "Miombo" forests, that cover these enormous, mostly rather flat, highland areas, provide abundant land for shifting cultivation, the easiest way to avoid various diseases and pests in the crop and deterioration of the soil structure. And they supply the
Map 1. Location of the major "Miombo" areas in Tanzania.
From: Scheffler, op. cit.

The "Miombo" forest provides abundant firewood for tobacco curing (Urambo District).
huge quantities of fire-wood needed to cure the tobacco, one of the most important processes in tobacco production.

Covered with tsetse infested forests, unfertile, and with 5–7 dry months per year and few natural water sources, these areas were never very attractive for human settlement. The traditionally sparse population, scattered in pockets here and there, was furthermore badly exposed to all the disruptive effects of the advance of early colonialism: extended tribal warfare, Arab slave hunting, the German crushing of the so-called "maji maji" rebellion against their rule, and the use by Germans and British of their land as a battlefield during World War One.

Having established "pax Britannica" the British colonialists between the wars showed little interest in these "unattractive" areas, except as labour-reserves for their export crop enclaves along the coast and to the North. The existing meagre subsistence crops were regarded as sufficient to produce new workers and to feed them off season.

Roughly so miserable, then, can we sketch the brief prehistory of the scene of our "success story". It is on this background, that tobacco production has since World War Two grown to a major industry in the country and one of its main foreign exchange earners.

Tobacco is said to have been introduced in Ruwuma region by European farmers from former Nyasaland and Rhodesia (now Malawi and Zimbabwe) in the 1930's through the Nkosi chiefs. In the early days the chiefs used their subjects' loyalty to encourage expansion of tobacco production in keeping with the demand of the whites from Malawi and Zimbabwe. It spread slowly but steadily and in 1948 a seed farm was established to multiply seed for distribution to tobacco growers. Soon the Songea Native Tobacco Board was founded with the purpose of developing tobacco production in Songea District and finding markets for the output. Ruwuma produced (as it still does) the technically simpler fire-cured tobacco, while the much more demanding and more profitable flue-cured variety was introduced in the remaining main tobacco areas.

In Iringa Region white settlers, mainly from Greece, and some missions started to grow tobacco in the 1940's, and until independence they provided the bulk of the country's tobacco output. It was not before a year after independence that Africans were allowed to grow tobacco at all in Iringa, but even today less than 100 large settler farms account for up to 90% of this region's crop. After a short spate of expansion of peasant production in the 1960's, non-settler tobacco is now limited to "ujamaa" (socialist) villages only in Iringa Region.

Tabora Region was one of the sites of the post-war period's spectacular "groundnut scheme" failure, which left behind large tracts of cleared land,
infrastructural constructions, farm buildings, and equipment. Having lost about Shs. 780 mil. on the groundnut affair through the Overseas Food Corporation, the colonial authority was eager to promote alternative activities. The search for alternatives revealed that ranching could prosper around Kongwa and tobacco could thrive well in the area around Urambo in Tabora Region. In the beginning only white farmers were allowed to grow tobacco in Urambo. But from the midfifties onwards Africans were encouraged to join in, both in some areas of traditional settlement and in newly established settlement schemes. Since then Tabora Region has been by far the most important area of African small-scale flue-cured tobacco production, although it later spread also to the neighbouring Mpanda and Chunya Districts.

So both in terms of location and production processes (flue- and jire-curing, but also different agricultural methods) flue-cured and fire-cured tobacco are quite distinct crops in the Tanzanian context, where they also have different marketing outlets, since fire-cured tobacco is marketed and consumed locally as well as by the modern industry, while flue-cured tobacco is purely an industrial crop with official marketing channels. Consequently the two crops exhibit similarly unconnected trends in their forms of production. It has been possible and necessary therefore, by and large, to limit this study to one crop, i.e. flue-cured tobacco. Occasionally fire-cured tobacco is mentioned to point out particular similarities or differences between the two, but they have only been treated systematically together when it could hardly be avoided, that is in relation to the national economy and its relations with the international markets (where there is both institutional and some statistical overlapping).

Although it does produce flue-cured tobacco, we have similarly excluded the Greek settler enclave, since it operates under quite specific conditions and could only contribute little to the general theme of our analyses, development of peasant commodity production, which is the predominant tendency in tobacco production in Tanzania as well as in many other crops here and in other underdeveloped countries.

Table 1 and Figure 1 demonstrate that, in terms of volume of total output, peasant tobacco production in Tanzania has indeed been a remarkable "success story". The constant and rapid upward trend, that has only been broken in the last three years (after villagization, see below) also implies that over the relatively short span of 20 years ever increasing numbers of former subsistence producers (today approaching 50,000 households) have effectively adopted the very complicated agricultural and economic techniques involved in flue-cured tobacco production, and have thoroughly adapted their social and productive lives accordingly.
Table 1. Development trends in flue-cured tobacco output in Tanzania 1957–77 Three year averages

<table>
<thead>
<tr>
<th>Harvest Years</th>
<th>Total Average tonnage</th>
<th>Increase (Decrease)</th>
<th>Percentage of total tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tabora Region</td>
</tr>
<tr>
<td>1957–59</td>
<td>1,800</td>
<td>−17%</td>
<td>23%</td>
</tr>
<tr>
<td>1960–62</td>
<td>1,500</td>
<td>60%</td>
<td>33%</td>
</tr>
<tr>
<td>1963–65</td>
<td>2,400</td>
<td>83%</td>
<td>51%</td>
</tr>
<tr>
<td>1966–68</td>
<td>4,400</td>
<td>95%</td>
<td>56%</td>
</tr>
<tr>
<td>1969–71</td>
<td>8,600</td>
<td>42%</td>
<td>59%</td>
</tr>
<tr>
<td>1972–74</td>
<td>12,200</td>
<td>12%</td>
<td>64%</td>
</tr>
<tr>
<td>1975–77</td>
<td>13,700</td>
<td></td>
<td>59%</td>
</tr>
</tbody>
</table>

* Average of first two years only
b data not available

Fig. 1. Development of flue-cured tobacco output in Tanzania 1956–77. Three year rolling averages

a. Total production
b. Small scale production. (N.B. The latest average is for two years only, i.e. 1975–76.)
Our analyses will chart the variations over time in the course of this "success story" in agricultural development and point out some of their conditions. But we are particularly concerned to show, however, that it is definitely not an unqualified "success".

There has been a development of the productive forces, but it took the form of a jump forward (not a "great leap") with subsequent stagnation and little build-up of the local capacity for further cumulative or derivative development within agriculture or in other productive sectors of the local economy.

There has been an increase in incomes compared to pre-tobacco levels but the average real income amongst the tobacco growers has been declining for the last 12–14 years.

The peasants have been specialized and thoroughly incorporated in the market economy, but almost exclusively in terms of extrovert commodity circuits, one-sidedly related to tobacco, with insignificant local linkage or multiplication effects in the rural areas. External monopoly control (by private capitalist and/or parastatal organizations) over these commodity circuits together with the petty commodity character of production and the subsistence based reproduction of the peasant households furthermore facilitates increasing extraction of surplus from the direct producers through unequal exchange.

On this basis large organizations have been built up to canalize the relations between the individual petty producers and the surrounding economy and to promote expansion of production. But it is suggested here, that the system to a large extent enables them to operate more in favour of the organizational and material self-interest of the bureaucracy than to the benefit of productivity and the direct producers. Thus efforts to control and direct also the immediate production processes are often felt by the producers to aim primarily at increasing the extractable surplus, with little concern for the peasant labour economy as a whole.

Finally it must be noted that the whole tobacco adventure is based on heavy exploitation of the natural forest resources, which may in the long run have the most serious ecological consequences for the whole area.

In order, to the extent possible, to cover all aspects of the "story" the main body of the book is divided into two parts. Part I examines the history of tobacco production in the main tobacco producing area, Tabora Region, concentrating especially on the emergence and disappearance of different types of organization of production under the influence of changing conditions of production. Part II deals with the presently predominant form of production, peasant petty commodity production, and includes such aspects as its resource base, technological development, the labour base of
the relations of production, and its subjection to other parts of the national and international economy.

We have, finally, added a theoretical postscript where we try briefly to outline how a theoretical framework has, in our view, enriched the analysis presented in the book, and what we feel this analysis can contribute to the theoretical discussions on contemporary peasancies in the Third World.

Notes

1. The exchange rate of T.shs. has fallen from between 700 and 800 T.shs. per 100 US$ in the 1960’s to presently 830 T.shs. = 100 $.

2. Calculated from the following table, which also includes figures on fire-cured tobacco:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total tons</th>
<th>Tabora Region tons</th>
<th>Peasants tons</th>
<th>Large farmers tons</th>
<th>Fire cured tobacco Total tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955/56</td>
<td>1400</td>
<td>200</td>
<td>(30)</td>
<td>1400</td>
<td></td>
</tr>
<tr>
<td>1956/57</td>
<td>1600</td>
<td>300</td>
<td>(50)</td>
<td>1500</td>
<td>x</td>
</tr>
<tr>
<td>1957/58</td>
<td>1600</td>
<td>400</td>
<td>100</td>
<td>1500</td>
<td>x</td>
</tr>
<tr>
<td>1958/59</td>
<td>2100</td>
<td>500</td>
<td>100</td>
<td>2000</td>
<td>x</td>
</tr>
<tr>
<td>1959/60</td>
<td>1800</td>
<td>500</td>
<td>200</td>
<td>1600</td>
<td>x</td>
</tr>
<tr>
<td>1960/61</td>
<td>1600</td>
<td>600</td>
<td>300</td>
<td>1300</td>
<td>x</td>
</tr>
<tr>
<td>1961/62</td>
<td>1100</td>
<td>400</td>
<td>300</td>
<td>800</td>
<td>600</td>
</tr>
<tr>
<td>1962/63</td>
<td>1500</td>
<td>700</td>
<td>500</td>
<td>1000</td>
<td>800</td>
</tr>
<tr>
<td>1963/64</td>
<td>1800</td>
<td>900</td>
<td>900</td>
<td>900</td>
<td>332</td>
</tr>
<tr>
<td>1964/65</td>
<td>4000</td>
<td>2100</td>
<td>2200</td>
<td>1800</td>
<td>1100</td>
</tr>
<tr>
<td>1965/66</td>
<td>3600</td>
<td>2000</td>
<td>2400</td>
<td>1200</td>
<td>1500</td>
</tr>
<tr>
<td>1966/67</td>
<td>4600</td>
<td>2400</td>
<td>3000</td>
<td>1600</td>
<td>3100</td>
</tr>
<tr>
<td>1967/68</td>
<td>5100</td>
<td>3100</td>
<td>x</td>
<td>x</td>
<td>2200</td>
</tr>
<tr>
<td>1968/69</td>
<td>8100</td>
<td>4500</td>
<td>x</td>
<td>x</td>
<td>3500</td>
</tr>
<tr>
<td>1969/70</td>
<td>8900</td>
<td>4700</td>
<td>x</td>
<td>x</td>
<td>2100</td>
</tr>
<tr>
<td>1970/71</td>
<td>8800</td>
<td>5700</td>
<td>x</td>
<td>x</td>
<td>3100</td>
</tr>
<tr>
<td>1971/72</td>
<td>10600</td>
<td>6500</td>
<td>7800</td>
<td>2800</td>
<td>3600</td>
</tr>
<tr>
<td>1972/73</td>
<td>10800</td>
<td>6800</td>
<td>7900</td>
<td>2900</td>
<td>2200</td>
</tr>
<tr>
<td>1973/74</td>
<td>15300</td>
<td>10100</td>
<td>11300</td>
<td>4000</td>
<td>2900</td>
</tr>
<tr>
<td>1974/75</td>
<td>11900</td>
<td>7200</td>
<td>8800</td>
<td>3100</td>
<td>2300</td>
</tr>
<tr>
<td>1975/76</td>
<td>14500</td>
<td>8600</td>
<td>10700</td>
<td>3800</td>
<td>4600</td>
</tr>
<tr>
<td>1976/77</td>
<td>14600</td>
<td>8200</td>
<td>x</td>
<td>x</td>
<td>3700</td>
</tr>
</tbody>
</table>

"Figures from Bauerliche Produktion unter Aufsicht am Beispiel des Tobakanbaus in Tanzania. Walter Schemer. Munich 1968, Table 1."
The following is an "amateur's impression" of some of the basic techniques of tobacco growing:

(a) In the dry season (June–Sept. the often heavy forest is cut down and new plots cleared for the coming tobacco growing season.

(b) Towards the end of the dry season the seedbeds are prepared. They must be located in a different place each year, and a well has to be constructed nearby. Each bed has a certain width and length, corresponding to one acre of planted tobacco. The seedbeds are cleared and thoroughly cultivated, and a layer of dry branches and grass is burned on top of it to kill bacteria, insects, and weed-seeds. After a specified number of days the tobacco seeds are sown by mixing a cup-measure (distributed by TAT) of the very small seeds with water in a watering can and watering the bed evenly with the mixture. At different times of the process given measures of fertilizer, insecticides, and pesticides are watered onto the seedbed in the same way. Sometimes insecticides are injected into the deeper soil with an injector pump. The seeds have to be covered with a thin layer of mulched straw, either directly on the ground, or better as a kind of roof some 10 cm. above the ground on a skeleton of sticks. This layer protects the small plants against the sun and maintains moisture in the soil. It is gradually thinned over the next two months. In the two month period before the seedlings are ready for planting, the seedbed has to be watered three times a day, when it is not raining.

(c) In the meantime the tobacco plots are cultivated and provided with ridges about 1 m. apart.

(d) On a rainy day the mature seedlings are transferred from the seedbeds to the tobacco plots, and after about 4 days fertilizer is applied in two or three holes made with a stick close to each plant. The whole field is then reridged. To get a good crop it is essential to apply the right amount of fertilizer as too little nitrogen gives small leaves, while too much results in bad quality. It is therefore necessary for the grower to estimate the content of natural nitrogen in the soil, and not just to rely on the officially recommended rates of fertilizer application, which are often too high.

(e) In the approx. 2 months between planting and the first harvest the fields are weeded and insecticides/pesticides are applied if necessary. When flowering starts the flowers have to be cut off (topping).

(f) The tobacco leaves ripen from the bottom up, and have to be harvested at exactly the right time to give the best quality. This can be judged by the colour of the leaf. The best results
are achieved if each field is harvested almost every day in the 6–8 weeks harvest period, but as the curing process has to be started on the harvest day and occupies the barn for a week most people harvest only once or twice a week according to their barn capacity (1 or 2 barns).

Before harvesting the firewood needed for curing is cut up in the forest and transported to the barn. Only fairly big trunks can be used, and 15–20 m³ are supposed to be necessary for the whole harvest from 1 acre of tobacco (0.4 ha.), i.e. the equivalent of 0.5–1 ha. of forest per ha. of tobacco per year. Often the wood is only available at some distance from the fields, in which case the grower has to hire a lorry or tractor to transport it.

The harvested leaves are carried in big, heavy bales from the fields to the curing barn, where they are tied to long sticks and placed in the barn for curing (like herrings for smoking).

The curing barn is a small house, usually 4x4x4 m., built with sticks and clay or bricks, with a corrugated iron or thatched roof (often the best house in the homestead). At one end there is a furnace from which the heat is led through the barn in a thick iron tube along the floor and out at the other end. Curing takes 6 days, and each day a specific temperature (up to 80°C) has to be maintained (nights included) inside the barn. This is controlled on a curing thermometer marked with the appropriate temperature for each day.

After curing the growers grade their tobacco leaf by leaf, and each of the more than 10 existing quality grades are baled separately. The bales are brought to the nearest baling shed (up to 5 km. away), where the grading is controlled by TAT personnel, pressed, and wrapped in hessian and tarpaper obtained (on credit) from the TAT.

Each grower may deliver tobacco on 4–5 collection days during the season. Each time he gets a receipt showing the bales, kg., and grades of his tobacco. Some time after he has delivered enough to cover his input loan he gets his first payment, but as all growers are collectively responsible for the repayment of their society’s (now village’s) loan, and as the final grading and pricing is not done before the tobacco reaches TAT in Morogoro – both processes taking time – he may get his total payment in several instalments, the last one often half a year after his last delivery.
PART I

Development of Peasant Tobacco Production in Tabora Region
CHAPTER II

The History of Tobacco in Tabora¹

The area – Tabora and Urambo Districts

The area covered by this chapter is the former Tabora District, which has recently been divided into two, Tabora and Urambo Districts – because of their size rather than because of the number of people living there (Map 2).

Map 2. Location of Tabora Region in Tanzania.

In 1957 the rural population was about 150,000, increasing to 180,000 in 1967. With more than 160,000 sq.km. of land the population densities are extremely low, varying from 0.7 to 9.5 inhabitants/1 sq.km. in the district's administrative divisions in 1967.

According to the 1967 population census (before the settlement of a large number of Warundi refugees in the present Urambo District) the population's growth rate was slightly below the National average, while the district had some of the highest rates of both immigration and emigration in the country. It thus appears that the traditional mobility, with labour migration especially to the sisal estates along the coast, was maintained at least into the 1960's among the Wanyamwezi (the main tribe in the area), while lately it was increasingly balanced by immigrants from other areas, mainly from the West and the South, attracted by the newly prospering tobacco production.
The life histories of sample farmers, collected during the field work in the region, furthermore show that a large number, even among those who were born in Tabora, had moved several times within the region before settling in their present location—indicating also a large internal mobility among the local population.

In the last century Tabora town was established at the junction between several caravan routes coming from the interior and joining up before the last journey to the coastal towns. It developed as a main centre for Arab trade and labour recruitment to the caravans, and by the end of the century it was one of the biggest towns in East Africa. Although we know little about it, this development must also have involved the surrounding areas in trade with the town, migration to the town, and production of food supplies for the town population and the caravans. Thousands of mango trees are still one clearly visible result of the Arab influence, also in places which have later been depopulated.

Further away from the town the Arab presence was more negatively felt in terms of the slavetrade and raids, causing major upheavals and dislocation among the local population, a situation which was repeated during the First World War when the Tabora area was the scene of the major military campaigns in East Africa.

With the establishment of export crop producing areas along the coast and to the North, and the construction of the railway as a direct connection between the latter—as well as with the African interior through Kigoma harbour—and the coast, Tabora soon lost its importance as anything but a railway junction, and during the first half of this century the urban population decreased. (It is for example significant that there is still no direct road connection along the old caravan route from Tabora to the coast).

As it happened with other sparsely populated, low rainfall areas in the central part of the country the German and later the British colonial authorities initially had no other role for Tabora District than as a subsistence producing labour reserve. Very little change therefore took place in the agricultural system, and most probably there was even a reversion back to traditional subsistence agriculture around Tabora town. Labour migration is likely to have resulted in decreasing productivity.

The traditional agricultural system was of course adapted to the specific physical and climatic conditions in the area, which is dominated by vast, flat plains covered with huge forests, and very few hills or permanent rivers or streams. The only frequent natural variation is created by the numerous small depressions in the landscape, where water collects during the rainy season and where the otherwise homogeneous forest vegetation is interrupted by more open bush or grass and a few palm-trees.
Most man-made clearings in the forest are also found close to such depressions, as this is where it is fairly easy to ensure a permanent water supply by digging shallow wells. The average annual rainfall varies from about 800 mm, in the East to about 1000 mm. in the North-West, and is concentrated in one rainy season from November–December to March–April, so in the absence of permanent streams the possibility of getting water from wells is in most places a necessity for human settlement. (And for tobacco production, as the seed-beds need water every day for two months, and are watered from the wells three times per day, when it is not raining).

Apart from the thin forest topsoil the soil is generally infertile and sandy (favourable for tobacco and groundnuts), so a system of shifting cultivation was practised, to which the many abandoned clearings in the forest bear witness. The main crops were millet, cassava, groundnuts and beans, but probably in the last century maize and rice were introduced and replaced millet as the more important cereals. It was mixed agriculture, as many families had some cattle. Also hunting and gathering were important for the peoples subsistence, and later even for their small cash incomes, as honey became one of the few products sold out of the district. Additional small monetary incomes derived from the sale of occasional surpluses of rice, groundnuts, and animal products.

In such a system of mixed slash and bum agriculture, animal husbandry, hunting, and gathering the land is very extensively used, and during the colonial period, when the need for defence against enemy attacks and slaveraids was no longer felt, it had a centrifugal effect on the settlement pattern, tending towards small, scattered clusters of households. Certain areas, though, were more or less depopulated in the same period, as a result of tsetse infestation and the government’s anti-tsetse policy.

The first 15 years – Urambo and Tumbi Tobacco Schemes

After the Second World War the Urambo railway station, situated on the central railway some 80 km. West of Tabora town in the middle of a huge, almost uninhabited forest, was chosen as the centre of one of the sections of the great, infamous groundnut scheme, which was established at great costs by the colonial regime in order to settle demobilized British soldiers to ensure the supply of vegetable oils, and to increase its revenue from the protectorate. By 1950 it was, however, clear that the scheme was, if not agriculturally then economically, a disaster. This is not the place to go into details of the groundnut scheme, and it is sufficient to note, that the search
The remains of the large settler farms can still be seen throughout the Urambo Scheme.

for some other way to make use of the large infrastructural works that had been undertaken in connection with it, i.e. establishment of Urambo town (now the District Town), building of houses and farms for the European settlers and their labourers, import of farm machinery, construction of roads and water supplies, and the clearing of large tracts of forest, was the major factor behind the introduction of tobacco production in 1951. (For location see Map 3).

After a short experimental period it turned out to be highly profitable, and soon all the large farms, about 40 in number, into which the groundnut scheme in Urambo had been divided were converted into tobacco farms. Initially they were all European managed, under various ownership and control arrangements with the scheme authority, the Overseas Food Corporation (OFC) – a British parastatal. These large farms were to some extent mechanized (tractors and bulldozers) but did also employ a large, mainly seasonal, labour force.

Each farm would grow 5–15 ha, of tobacco and similar areas of maize, groundnuts and perhaps rice each year, all on a commercial basis, and employ 2–3 tractors and 50–100 seasonal labourers, mainly on a 6 months contract. The labourers were migrants, but many cultivated a small area of maize (0.2 ha. or so) while they were there.

At their peak from 1957 to 60 the large farms together had some 500 ha. under tobacco, producing 300–350 tons annually worth about 2.5 mill. shs.
The motivation behind the subsequent 'africanization' of the Urambo Scheme was clearly political. There were mounting pressures against white, colonial predominance, and especially against anything involving white settlers, and as openly stated by the OFC: "One of the most stabilizing influences in an African community, under the present economic and political pressure being exerted within and without, is a healthy, prosperous yeoman farmer class, firmly established on the land, appreciative of its fruits, jealous of its inherent wealth and dedicated to maintaining the family unit on it."²

In 1954 Tanganyika Agricultural Corporation (TAC) took over the project from the OFC. The TAC, which was a Tanganyika based 'development' parastatal, started to speed up the settlement of African tobacco producing small-holders in the scheme, a policy which had been introduced by the OFC, but on a very small scale.

Initially the small-holder part of the scheme was so closely directed and controlled by the scheme personnel on the large farms, to which it was attached as block farms, that the difference between the small-holders and ordinary labourers must have been minimal indeed. Gradually however, the African tobacco growers were given more responsibility: they started to raise their own seedlings instead of buying them from the corporation; they got fertilizers and insecticides on credit and administered it themselves; they were allowed to increase their tobacco area from 1 to 2 and then to 3 or more acres (0.4–0.8–1.2 ha.); and in 1958 they started to cure their own tobacco (to cure = the drying process in the curing barn) instead of selling the green leaves to the corporation for large-scale curing.

A major technological break-through (the construction of an efficient small-scale curing barn) thus finally allowed the small producers individually to carry out all the steps in the production process, increasing both their work-loads and incomes considerably. This also meant that it was no longer necessary to attach them to a large farm, thereby making these unnecessary from a strictly technical point of view, and at the same time making possible the breaking up of the block farms and the resettlement of the tobacco growers on larger individual plots allocated to them in the forest. All this was done while very strict supervision was maintained by the scheme personnel, who could apply sanction's against non-adherence to the rules by withdrawing services like tractor-ploughing and transportation of firewood, and the credit which financed not only inputs such as fertilizers and insecticides, but also hired labour on the small-holder tobacco plots.

By the end of the 1950's a regular system - also for Africans - of large, medium, and small farms was introduced, whereby the growers in the first two categories were given larger and more favourable loans than those in
the third category, and the scheme management decided which category a
grower was allowed to join. In the late 60's the system was further modified,
when a fourth category was added called "Ten Acre Farmers" or "Mateneka"
in Kiswahili. Only they were supposed to grow more than 5 acres (2 ha.) of
tobacco, and were given the larger more favourable loans, like medium and
large farms.
Between 1958 and 1962 any new African settler had to join a "green leaf
school" for one year before being allocated his own farm – if he passed
satisfactorily the "school" which was organized similarly to the whole
scheme before 1958, i.e. with African growers attached to a large farm,
which bought and cured their green leaves. After 1962 farms were allocated
immediately to new settlers, who were only accepted, however, if they were
recommended by existing growers as somebody who knew about tobacco
production; a system which almost forced aspiring settlers first to become
labourers for some years, and which was maintained until 1968, when
admittance was completely liberalized – only to be closed with a few
exceptions from 1970 onwards.
While the number of African tobacco growers increased rapidly in the
early sixties (from about 100 in 1959/60 to 1,300 in 1964/65) all the
European settlers left the scheme between 1961 and 1964. In 1964 the TAC
was dissolved, but its functions were carried on almost unchanged, although
they were formally divided between the Ministry of Agriculture, the new
Village Settlement Commission, and the Urambo Farmers Cooperative
Society, created by the government for this purpose. So by 1964 the Urambo
Tobacco Scheme had achieved more or less the organizational form which
it was to maintain for the next 7-8 years.
In 1954, when the Urambo scheme had demonstrated the profitability of
tobacco production in this region, it was also introduced in the more densely
populated area around Tabora town, here by the East African Tobacco
Company (EATCo), a subsidiary of BAT, which had a tobacco marketing and
processing monopoly for all of East Africa (Map 3).
While the organization of responsibility and control over the production
processes went through almost the same phases as in the small-holder sector
of the Urambo scheme, the major differences were that in this Tumbi
scheme, as it was called, tobacco growing was introduced on already existing
peasant farms, which were not allowed to expand their tobacco area as fast
as in Urambo. There were only a couple of white settlers in the area, and no
system of favouring the larger farms was established until the late sixties.
Consequently the number of growers, who were given a tobacco licence
by the EATCo, stating the conditions they had to follow, initially increased
faster in Tumbi, while the average tobacco area remained smaller than in
Urambo. Tobacco growers and non-growers were living scattered among each other, and apparently much more of the 'traditional' non-commercialized socio-economic pattern was maintained in this area, where production for example remained based primarily on household labour, while in Urambo even many small farms used seasonal hired labour.

Expansion after 1965

By 1964165 still only these two schemes existed, comprising about 3,000 registered tobacco growers, or 11% of the total number of households in the present tobacco producing area (i.e. Urambo and Tabora Districts, except the Eastern part of the latter, which has a rainfall regime that is marginal for tobacco production). Until then, admission to the ranks of tobacco growers had been restricted by the authorities, but in the second half of the sixties it was liberalized, resulting in rapid expansion both within and outside the two old schemes.

Between 1965 and 1970 tobacco production was spread out to the whole area around Tabora town, between there and Urambo and to the populated areas along the railway line West of Urambo. New schemes were established at Ussoke to the East, Ulyankulu to the North, and Kaliua to the West of Urambo. A further drive to increase the number of growers came in 1971/72 with the start of the so-called "Tobacco complexes", North-West (Uyowa), West (Igagala), and South (Mibono and Kitunda) of the existing tobacco schemes (Map.3).

In the 1973174 season, the last season prior to villagization (see below), about 113 of all households in the tobacco area were registered as tobacco growers.

After villagization3 which took place at the beginning of the 1974175 season, it has been decided by regional authorities that all the villages should be tobacco villages, and that therefore all households in the area must grow tobacco. This decision, however, is still in the process of being implemented, but by the 1976/78 season the proportion of tobacco growers had increased to over 50% of the estimated total number of households (table 2). In the villages in the old tobacco areas, in which the field work for this study was carried out, the proportion of tobacco growers can even be estimated to be as high as 70–80% of all households.

It should be noted, that this development has not only involved an increasing proportion of the region's indigenous population, but also a large number of immigrants from other regions of Tanzania, especially Kigoma and Rukwa, as well as many Warundi refugees settled in Urambo District.

All this means, that the spread of tobacco growing to still more producers
Table 2. Tobacco growers, households, and tobacco production in Tabora and Urambo Districts, 1965 to 1975

<table>
<thead>
<tr>
<th></th>
<th>1964/65</th>
<th>1973/74</th>
<th>1976/77</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of households in the two districts&lt;sup&gt;a&lt;/sup&gt;</td>
<td>33,000</td>
<td>49,000</td>
<td>54,000</td>
</tr>
<tr>
<td>No. of households in tobacco area&lt;sup&gt;b&lt;/sup&gt;</td>
<td>27,000</td>
<td>41,000</td>
<td>44,000</td>
</tr>
<tr>
<td>No. of tobacco growers&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3,000</td>
<td>13,600</td>
<td>22,900</td>
</tr>
<tr>
<td>Growers as % of households in tobacco area</td>
<td>11%</td>
<td>33%</td>
<td>52%</td>
</tr>
<tr>
<td>Total production, tons&lt;sup&gt;d&lt;/sup&gt;</td>
<td>2,100</td>
<td>10,100</td>
<td>8,200</td>
</tr>
<tr>
<td>Production/ grower, kg.</td>
<td>700</td>
<td>740</td>
<td>360</td>
</tr>
</tbody>
</table>

is not yet a finished process. Although the coverage can of course never be expected to reach 100%, there is no doubt that with the present determination among the authorities, the recent producer price increases, and the exclusion of non-tobacco growers from facilities to obtain maize fertilizer, the proportion of tobacco growers will continue to grow from the present 1 out of 2 households, just as a continued immigration must be expected.

Total production therefore should be expected to resume its growth (after the setback immediately after villagization) although not at the same rate as the number of growers, since as “late-comers” those households which only start growing tobacco sometime in the future can probably be expected to remain among the "weaker", more marginal, tobacco producers. The effect of villagization, which is likely to work in the same direction is discussed in chapter IV.

Institutional changes

While the schemes established in the last half of the 1960’s were organized in the same way as the Urambo scheme (Kaliua) or the Tumbi scheme (around Tabora, Usoke, and Ulyankulu), the so-called "Tobacco complexes", established in 1971/72, were part of a World Bank sponsored programme to expand tobacco production in the country as a whole, including some new organizational principles, i.e. resettlement of the future growers closely together in actual village settlements, and communal production.

The programme, however, came off the ground slower than was expected, people were reluctant to join the complexes, and communal production was given up after a few years.

With villagization a large number of people were moved into the "complexes", which now reached the size they were planned to have. At the same time large concentrated villages were established in the rest of the
area, so that all the old schemes also moved to some degree towards the same village designs as in the "complexes", with agricultural production on large "blocks" of individual plots around the village, facilitating control and supervision by extension personnel and other authorities.

As in Urambo, cooperative societies had been created in the other schemes in the 1960's, to take over some of the functions of TAC and EATCo, primarily distribution of inputs, collection of tobacco from the growers, and administration of the credit and payment system, where each society became collectively responsible for the repayment of all of its members' debts. Credit was provided to the societies by the National Development Credit Agency (NDCA), which also introduced a scheme to serve the larger farmers directly.

Marketing of the produce delivered from the societies was done by BAT Tanzania, after EATCo had been broken up into national companies, while supervision and extension was undertaken by personnel from the Village Settlement Commission and the Ministry of Agriculture.

After 1970, when BAT had been nationalized, a new parastatal, the Tobacco Authority of Tanzania (TAT), took over BAT's marketing functions, as well as all research, training, extension, supervision, and control of all the schemes. Since then personnel from the Ministry of Agriculture have played a very minor role in the area. At the same time as TAT was founded NDCA was replaced by the Tanzania Rural Development Bank (TRDB) on the credit side.

A year after villagization the former cooperative societies were abolished and replaced by the villages as the units responsible for collection of tobacco, distribution of inputs, and credit procurement and repayment, which most probably will mean that more of the financial administration will have to be concentrated in the TAT and TRDB. At the same time the TAT personnel in the villages (the "bwana shambas") have become more involved in politico-administrative functions.

Financial conditions of tobacco production

If the formal institutional set-up has changed a lot over the years – as we have seen above – so have the financial conditions of tobacco production in the Tabora area. One major condition is set by the producer prices. Before 1965 the total production in the country was smaller than internal consumption, so producer prices could be almost arbitrarily fixed by the tobacco monopoly in cooperation with the government, if the aim was to protect the internal production. This was clearly the case in the mid-fifties, when an average price as high as almost 10 shs./kg. made the new, large European farms
highly profitable. The African small holders, who delivered green leaves to the European farms, were paid 3–10 cents/lb., or the equivalent of little more than 1 sh. per kg, cured tobacco. Although the average producer price had fallen to around 7 shs. 1 kg. cured tobacco in 1965, this was still well above the world market price, and when an increasing surplus had to be exported in the following years, a sharp decline in the producer prices was experienced. From about 7 shs./kg, in 1965 the average price fell to less than 5 shs./kg. in 1970 and 1971 (see Tables 3 and 4). With increasing world market prices in the seventies, the producer prices finally reached the 1965 level again in 1975, but at the simultaneous speed of general inflation this did not even maintain the real value of one kilogram tobacco compared with 1970.5

The costs of the necessary inputs did not change much until around 1970, when they started to grow – slowly at first, but more rapidly (i.e. some 200 %) in the last 3–4 years. The growers themselves though did not feel directly the last increase so much, as its major component was offset by a TAT fertilizer subsidy, keeping the prices at the 1972/73 level until the 1976/77 season, when they were allowed to increase about 40 %, reducing but not abolishing the subsidy. The TAT does, however, finance the tobacco fertilizer (NPK) subsidy from the margin between producer and export prices, which means that it has no real effect on overall producer incomes, but possibly on their distribution. The maize fertilizer (S/A) subsidy on the other hand is part of the National Maize Project and is thus of real benefit for the tobacco growers.

Throughout the period the inputs have been obtained on credit by the producers and the costs deducted from their subsequent payment for sales of tobacco, together with an interest of 5 % initially, later increased to 8 1/2 %. Bad debts were covered by the societies from the levy charged on every kilo sold by the members, an extra expense of which the large farmers, who got credit directly from NDCA, were exempted.

Initially the Urambo growers were given larger input loans, e.g. for mechanized ploughing undertaken by the scheme authority, than their Tumbi counterparts, but in the late sixties this favour was reduced to comprise only the larger farms, but extended to all schemes. Everywhere there were regulations concerning the acreage for which the growers could get credit, but with more limiting regulations in Tumbi than in Urambo.

The most important differentiation in the credit system was, however, related to the possibility of getting loans in cash, over and above the input loans, which were supplied in kind. In the early sixties all growers in Urambo could get such loans amounting to some 300 shs. per acre (0.4 ha.) compared to 180 shs. for the Tumbi growers. Later this was modified, so that for instance in the 1970/71 and 1971/72 seasons Ten acre-, Middle-, and Large
farmers in Urambo got 370 shs. per acre (in some cases even more), while ordinary growers got only 240 shs./acre in the first and 120 shs./acre in the latter season. From 1972/73 onwards the cash element has been abolished completely in Urambo. In Tumbi, on the contrary, it was abolished earlier for everybody but a few large so-called "bank farmers", who got credit through the ordinary banks, but it was reintroduced in 1971/72 as a flat rate of 200 shs. per grower, irrespective of acreage. Initially it was meant as famine relief after a bad year, but was maintained until it was finally abolished again in 1976.

In general all differentiation in credit availability based on size-categories among the growers has been stopped since the 1972/73 season.

In this and the preceding sections the history of the conditions for tobacco production for the last 25 years in Tabora Region have been outlined. The following sections deal with the consequences for production and incomes.

The growth of tobacco production in the Urambo scheme and around Tabora town

The two first tobacco schemes, Urambo and Tumbi, became the prototypes for the later schemes until the establishment of the "Tobacco complexes" in 1971 and villagization in 1974. The development of these two schemes may therefore be taken as typical for the main streams of development in the whole area up until 1974. Tables 3 and 4 show the growth in number of growers, hectarage, production, and value of the tobacco produced in each of the two old schemes.

The two initial tobacco schemes, Urambo and Tumbi (the latter was the core of the area later covered by the now defunct Tabora Tobacco Growers Cooperative Society, Ltd. – TTGCS, i.e. the whole tobacco area in the present Tabora District except Mibono and Kitunda "complexes"), were started with very different conceptions of the preferable type of tobacco growing enterprises. The Urambo scheme was aimed at creating a group of thoroughly commercialized tobacco farmers, to a large degree basing their production on hired labour, and concentrating on tobacco growing to the extent that they would even buy a significant part of their food requirements in the market. Even a smaller group of large farmers were encouraged.

In Tumbi, on the other hand, the preferred tobacco grower used primarily his family labour, supplemented perhaps with hired labour in the peak periods. Similarly he would grow most of the basic food needed by his family on his own farm, exhausting mainly the surplus labour for tobacco production.
Table 3. Development of tobacco production in the Urambo Scheme

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of growers</th>
<th>Hectares</th>
<th>Production tons</th>
<th>Value '000 shs. (society level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55/56</td>
<td>64</td>
<td>428</td>
<td>1510</td>
<td>2400</td>
</tr>
<tr>
<td>62/63</td>
<td>26</td>
<td>385</td>
<td>1780</td>
<td>2680</td>
</tr>
<tr>
<td>64/65</td>
<td>11</td>
<td>301</td>
<td>1370</td>
<td>1580</td>
</tr>
</tbody>
</table>

Excluding large farmers, who were almost exclusively white

Value of cured tobacco, of which the peasants got only a minor part

All figures are rounded

In both schemes a development in the desired direction was brought about through the rules of admission, administrative measures, and credit availability, which were also behind the initial slow growth in the number of growers in both schemes, while there were plenty of prospective applicants, who wanted to join in the profitable tobacco adventure. The limitations imposed on the growth among the African growers were probably caused by a fear on the part of the scheme authorities, that a drop in producer prices to the world market level, which would be necessary if production surpassed internal consumption, would force out the large

Table 4. Development of tobacco production in the area covered by the TTGCS (now defunct), originating from the Tumbi scheme

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of growers</th>
<th>Hectares</th>
<th>Production tons</th>
<th>Value '000 shs. (society level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55/56</td>
<td>330</td>
<td>500</td>
<td>1670</td>
<td>4600</td>
</tr>
<tr>
<td>62/63</td>
<td>40</td>
<td>250</td>
<td>1200</td>
<td>5200</td>
</tr>
</tbody>
</table>

Approximate price paid to small holders for the green leaf equivalent of 1 kg. cured tobacco

All figures are rounded
producers, including the most important group in Iringa on which they depended heavily economically and organizationally, as it still provided the main basis for the whole distribution, marketing and processing network for tobacco.

After independence this policy was, however, changed, as the new regime was more in need of foreign exchange than of European settlers. The limitations on admission to the two schemes were reduced, and in both the number of growers increased rapidly in the next two years. After 1965, however, while the TTGCS area maintained the rate of expansion, new limitations had to be imposed in Urambo, which as a settlement scheme needed more infrastructural work before new areas could be opened for tobacco production, and where the size of the plots allocated to each settler (about 18 ha.) put constraints on the availability of land within the range of the scheme. From 1970 to 1974 admission to this scheme was closed, apart from some exceptional cases each year.

The rules concerning the allowed acreage remained different in the two schemes until 1965, and helped by the very favourable credit terms, the Urambo growers had by then increased their average tobacco area to 1.4 ha., while their Tumbi counterparts had only 0.7 ha. on an average under tobacco. After the rules were subsequently liberalized in the TTGCS area, the mean tobacco areas in the two schemes have converged, not only because it reached one hectare in the TTGCS area in 1970 and has remained there, but also because the mean in Urambo decreased slowly to one hectare in 1973/74.

Since 1965 per hectare yields have in both schemes with annual variations remained at the same level of around 600 kg./ha. in the TTGCS area (1973/74 was an exceptionally good year) and 700 kg./ha. in Urambo, a difference which can probably be explained by the differences in soil fertility and rainfall, while changing intensity of supervision and regulation of the methods used, or changing differentiation among the growers seem to have little influence on the yields achieved.

The peasants' economic gain from tobacco production has not only depended on area and yields, but also on changes in producer prices, in the prices of inputs, and in the price relations between these and other, mainly consumer, goods.

Gross value of tobacco per grower, before deductions, was given in tables 3 and 4. Gross value of course depends on the hectarage, the yield, the quality, and the price.

We have already seen that mean hectarage was converging towards 1 ha./grower in the whole region, average yields have been stagnant, and there is no indication of major changes in quality either. Producer prices took
a deep dive in the second half of the sixties and have only in the last year or two reached the same level as in 1965 – in monetary terms.

So in total the mean gross value per grower went down in Urambo from 7,600 shs. in 1965 to 4,200 shs. in 1974, while it had been even lower in the intervening period. In the TTGCS area it fell from 3,000 shs. to 2,400 shs. in 1971, but it then increased to 3,300 in 1973 and to 5,400 in the exceptionally good year 1974.

For the growers themselves the development of net incomes, after deduction of costs of inputs, interest on loan, and levies, is, however, of more direct interest, and perhaps even more so the net real income, i.e. the net income adjusted for changes in the prices of those goods they buy with their tobacco incomes. These we have tried to calculate in table 5.

Table 5. Average gross incomes from tobacco production, deductions before payment (excl. deduction for cash loan), and net incomes

<table>
<thead>
<tr>
<th>Urambo Scheme</th>
<th>Shs./grower</th>
<th>64/65</th>
<th>69/70</th>
<th>72/73</th>
<th>73/74</th>
<th>74/75</th>
<th>75/76</th>
<th>76/77</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input loan:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPK fertilizer</td>
<td>570</td>
<td>500</td>
<td>460</td>
<td>190</td>
<td>140</td>
<td>830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S/A fertilizer</td>
<td>-</td>
<td>100</td>
<td>140</td>
<td>120</td>
<td>130</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other inputs</td>
<td>450</td>
<td>260</td>
<td>130</td>
<td>280</td>
<td>540</td>
<td>240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total loan</td>
<td>1020</td>
<td>860</td>
<td>730</td>
<td>590</td>
<td>810</td>
<td>800</td>
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<tr>
<td>Interest (incl. interest on cash loan)</td>
<td>130</td>
<td>40</td>
<td>40</td>
<td>50</td>
<td>70</td>
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<tr>
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<td>230</td>
<td>350</td>
<td>100</td>
<td>160</td>
<td>160</td>
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<tr>
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<td>1130</td>
<td>1120</td>
<td>740</td>
<td>1040</td>
<td>1030</td>
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</tr>
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<td>3050</td>
<td>3400</td>
<td>4100</td>
<td>1700</td>
<td>2900</td>
<td>2900</td>
<td></td>
</tr>
<tr>
<td>Net tobacco income</td>
<td>6200</td>
<td>2100</td>
<td>2300</td>
<td>3000</td>
<td>1000</td>
<td>1900</td>
<td>1900</td>
<td></td>
</tr>
<tr>
<td>Net real income</td>
<td>15 –</td>
<td>42 –</td>
<td>37 –</td>
<td>41 –</td>
<td>11 –</td>
<td>1900</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>in 1976 prices</td>
<td>21000</td>
<td>6200</td>
<td>5500</td>
<td>5400</td>
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<td>-</td>
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<td>140</td>
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<td>1040</td>
<td>1140</td>
<td>940</td>
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<tr>
<td>Interest (incl. interest on cash loan)</td>
<td>40</td>
<td>60</td>
<td>70</td>
<td>70</td>
<td>80</td>
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<td>200</td>
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</tr>
<tr>
<td>Total deductions</td>
<td>670</td>
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<td>1300</td>
<td>1510</td>
<td>1510</td>
<td>1300</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>Gross tobacco income</td>
<td>3000</td>
<td>2400</td>
<td>3300</td>
<td>5400</td>
<td>4300</td>
<td>4000</td>
<td>3400</td>
<td></td>
</tr>
<tr>
<td>Net tobacco income</td>
<td>2800</td>
<td>1400</td>
<td>2000</td>
<td>3900</td>
<td>2800</td>
<td>2700</td>
<td>1900</td>
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<tr>
<td>Net real income</td>
<td>54 –</td>
<td>27 –</td>
<td>32 –</td>
<td>53 –</td>
<td>30 –</td>
<td>2700</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>in 1976 prices</td>
<td>7900</td>
<td>4000</td>
<td>4700</td>
<td>7000</td>
<td>3400</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All figures are rounded to reasonable levels.
Apart from the changes in gross incomes, which have already been mentioned, the rate of total deductions (for input loans, interests, and society levies) have increased, from around 20% of gross income in both schemes in 1965 to some 30% in Urambo and 40% in the TTGCS area from 1970 onwards (again excepting the unusually good 1973/74 season in the TTGCS area).

For the growers this means not only a reduced net income, but also a higher risk element, as part of the deductions for costs of inputs are independent of the final result of the harvest in a given season. The net income reductions have been even more pronounced than as described above for gross incomes.

Most dramatic however is the fall in the estimated net real income at 1976 prices, especially in the Urambo area, where the mean net real income per grower has fallen from the level of the present-day income of a middle-level civil servant, to less than the minimum wage level for an unskilled worker.

Notes
1. The sources of historical data have been TRDB files in Dar es Salaam and Tabora, cooperative society files in Tabora and Urambo, information and statistics from regional administration and TAT offices in Tabora, and written, oral and visual information obtained through field work in four selected villages in the area. For the period before tobacco was introduced see *The Peoples of Greater Unyamwezi, Tanzania*, R.G. Abrahams, London 1967. On the early years of the schemes *Bayerische Produktion unter Aufsicht am Beispiel des Tabakanbaus in Tanzania*, W. Schemer, Munich 1968, has been particularly useful, although I tend to disagree with its technocratic attitude and conclusions. Unfortunately that research report must have been almost completely useless for the country it is dealing with, as it is published in German, and with all quantities given in German denominations, such as hectares, kgs, and DM, neither of which were in common use in Tanzania at the time of publication.


3. See following pages and especially Chapter IV, pp. 71–79.

4. Sources:
   a) Calculated from 1967 population census, at an assumed 3% growth rate, and an addition of approx. 7000 Warundi refugee families by 1973174.  
   c) 1964165 figure from W. Scheffler, op.cit. Other figures from TAT, Tabora office.

5. These are average prices obtained for the tobacco delivered, but they may be taken as indicators of changes in the general tobacco price level, as there are no indications of major quality differences, while the whole grading and pricing system has been changed at least once.

6. It may be worthwhile to describe in some detail how this table was constructed, as it is a typical example of the problems involved in using statistics in Tanzania – which bureaucrats and experts often tend, conveniently, to forget.
The figures for the first three years are based on Schemer op.cit., who quotes scheme reports as his main sources, but without indicating his evaluation of their reliability. It is likely, though, to be rather high due to the tightly controlled system of that time. But some figures for 1964/65 were only available from his own sample, e.g. the producer price per kg. from table 13, p. 73, Schemer, op.cit. from which other values in the present table were then calculated. Schemer's sample seems, however, to have had a lower than average yield per hectare, and in later tables he uses the gross income figure for a 1.6 ha. farm from table 13 for his established 2 ha. farms. All this gives a discrepancy between Schemer's later calculations of the farm economy in 1964/65 and those in this chapter, but it is hard to say if his are underestimates or mine are overestimates. In any case it makes no major difference for the implications drawn from the figures in this chapter.

For the years between 1965 and 1969 it has not been possible to obtain any statistics.

Figures for 1969-76 were available from TAT office in Tabora, and for 1977 in Urambo, and among these production and value may be assumed to be reasonably reliable as TAT is the marketing agency (although for the regional level the ministry of agriculture has a set of figures which are different from those of the TAT, but not so much that we may not allow ourselves to use the TAT figures).

The number of tobacco growers is more problematic, as the TAT has to get that from sources in Urambo. It should not be too difficult to get through, and if the TAT figures seemed reasonable from what we know about developments in the area, they have been maintained in the table. For 1974/75 however, the year after villagization, the TAT statistics show a jump to over 5,000 growers, with a subsequent decline to the 3,570 quoted for 1975/76. There is no indication in the field, that such a jump actually took place, and it seems likely that this is a case of wishful thinking – that all the villagers in the new villages actually started to grow tobacco immediately, whether they had done so before or not – and that the 1975/76 figure has been more adjusted to the realities. Consequently the number of growers is 'guessed' at 3,500 in 1974/75 in the table.

The 1973/74 figure has not been changed, but it may be too small, as a number of settlers who came in after 1970 were not registered anywhere, but worked in a kind of sharecropping system with earlier, registered settlers, because the scheme had been closed, with some exceptions only, for further settlement from that year. Some of the increase after villagization may be the simple result of the registration of such already existing growers.

Finally the TAT figures on the area of tobacco cultivation have been discarded as completely unreliable. They were given as 2,800 ha. in 1969/70 and 3560 ha. in 1973/74, but in the meantime they had been down to about 1,100 ha. in 1971/72 and 1972/73 with no parallel drop in production, and for 1974/75 TAT indicates only a small decrease in the area as opposed to a production which is less than half of that of the preceding year.

A completely different calculation of hectarage has therefore been made. From the field work it has become clear, that the peasants are very well aware of the necessity for fertilizer application, but that in general they expect the best combination of yield and quality to be obtained at a fertilizer rate of 10 bags per hectare instead of the recommended 12 1/2 bags. Going back through the files of the TRDB it was possible to find the quantities of fertilizer distributed to the peasants each year. Presuming that the small stocks remaining with the peasants from one year to the next would normally not change very much, and using a fertilizer rate of 500 kg.1 ha., it was then possible to calculate an estimated hectarage of planted tobacco.

It is known however that the peasants, because of villagization carried over unusually large stocks from 1974/75 to 1975/76, so instead of the first estimate of 1,500 and 1,300 ha. for the two years respectively, it is 'guessed' in the table that it should rather be something like 1,200 and 1,600 ha. which also corresponds better with the production figures.

Sources

Up to 1964/65 calculations are based on W. Schemer op.cit. (As he gives all prices in DM, the 1965 exchange rate of 1 DM = 1.78 shs has been used).

From 1970/71 onwards No. of growers, production and value are based on information
from TTGCS and 1976/77 from TAT Tabora. The hectarage has been calculated from the distributed amount of NPK fertilizer, assuming an application rate of 11 112 bags per hectare on average (as opposed to the recommended 15–17 1/2 bags), and assuming that the amount kept in stock by individual peasants does not vary significantly from year to year. It is known, however, that this last assumption does not hold from 1974/75 to 1975/76, when unusually large amounts were kept in stock by the peasants. So probable estimates have been made for the two years based on total distribution of NPK in the two years together.

The amount of NPK distributed in the different years was calculated from the figures in TRDB loan disbursement statements and stock balances for the TTGCS at TRDB H0 in Dar es Salaam. See also note 6 above.

8. Sources: All 1964/65 figures from Schemer, op.cit. – interest includes land-rent. Remaining years: Urambo Scheme from TRDB loan disbursement statements and stock balances, corrected for subsidies, but not society sales margins, so the actual loan figures for the peasants may be slightly higher; TTGCS area from TTGCS annual loan summaries (which state the actual loans to the peasants) except for 1976/77 which is also from TRDB files.

Net real income calculations: highest figure based on consumer price indices for minimum wage earners in Dar es Salaam, lowest figure on the national consumer price index. As the latter goes back only to 1970, the change in the lower figure between then and 1965 is also based on the first source. Both from: Bank of Tanzania, Economic Bulletin, Vol. II – No. 3 and Vol. X – No. 1. (For 1977 therefore only the March figure was available at the time of writing).
CHAPTER III

The Dynamics of the Organization of Production

Despite their falling tendency the incomes from tobacco production continued to be high enough to attract a steady stream of former non-tobacco growers from Tabora and elsewhere to the tobacco schemes. The numbers were even higher than immediately indicated by the statistics, as there were also many growers, who were leaving the schemes every year, because they had earned enough to return to their home areas, or because of misfortune resulting in large uncovered debts, from which they preferred to run away.

It is clear, however, that the 1974 growers earning a net real income of some 4–5,000 shs. were not the same, did not have the same prospects and the same behaviour, as those earning an average of 15–21,000 in Urambo in 1965, and neither did those earning 6–8,000 shs. in Tumbi at that time. But to understand fully the changes that have occurred it is necessary to leave the concept of an average grower, and to take a look at the changing differentiation and the changing forms of organization of production among the tobacco growers.

Available statistics cannot, however, say much directly about this kind of problematique, so the following is based primarily on interviews with people who have lived for a long time in the area, supplemented with a corresponding interpretation of existing quantitative information.

Large and Medium Farmers"

As we have seen above, the Urambo Scheme was originally based entirely on a rather small number of large-scale farms run by European settlers, and later also Africans (and Asians) were admitted to this category.

By 1964165, when most of the Europeans had left, there were still some 20 large farmers left (10 'Large', of which two were Africans, 10 'Medium', all Africans), cultivating 220 ha’s, or about 12 % of the total hectarage in the scheme.

* in the following called large farmers
They were all running partly mechanized enterprises, as some had bought used tractors fairly cheaply from the leaving Europeans, others new tractors made available partly on credit from the cooperative.

These farmers had thus started to invest in farm machinery, as well as buildings, while at the same time they financed most of their annual inputs, including a labour force of up to 20–30 labourers, with a fairly cheap credit.

The labourers were migrants on 7–9 months seasonal contracts according to which they got 3–600 shs. for the season plus food and shelter. Many later settlers started as labourers for some years.

In the early sixties the large non-european farmers were expanding their tobacco areas at a fast pace, taking advantage of the high tobacco prices compared with other prices, and the favourable credit terms, both of which reduced the risks involved in rapidly increasing debts. The main limiting factor at that time seems to have been the scheme authorities' hesitation in registering many new large farmers.

Their average tobacco area must have been about 10 ha. per year around 1964/1965, and they would have a similar area under maize (and rice), partly to feed their families and labourers, but mainly to utilize their tractors to full capacity, even if on a low profit crop like maize.

In table 6 below the average gross incomes, deductions, and net incomes for the Urambo scheme as a whole (see also table 5 above) are calculated on a per hectare basis. According to the available information the yields and quality of large farmers' tobacco did not differ much from that of ordinary growers, and neither did the costs of inputs etc., so it should be fairly realistic to use the overall per hectare figures also for the large farmers (if anything, their deductions were slightly lower and incomes slightly higher than average).

For a 10 ha. farm, then, the net income in 1965 was almost 50,000 shs. For the large farms, however, we must further deduct the costs of labour and the running costs of tractors etc., which Schemer (op.cit., p. 117) gives as 1,050 shs./ha. and 450 shs./ha. respectively, i.e. a total 15,000 shs. for 10 ha. Taking further account of other possible costs, such as maintenance of buildings, it can be estimated, that the large farmer was left with some 25–30,000 shs. to cover family labour and profit – which is equivalent in buying power to 60–100,000 1976-shs.

This money was invested in businesses, trade, bars, hotels, transport, maize mills, or in town houses for renting out in Urambo, Tabora, or elsewhere. Several former large farmers are still among the big businessmen and house owners in the area. But, as we have seen, some money was also ploughed back as agricultural capital.

Five years later, in 1970, the farmer register for the Urambo scheme
Table 6. Average gross incomes from tobacco production, deductions before payment (excl. deduction for cash loan), and net incomes

<table>
<thead>
<tr>
<th>Urambo Scheme</th>
<th>Shs./hectare</th>
<th>64/65</th>
<th>69/70</th>
<th>72/73</th>
<th>73/74</th>
<th>74/75</th>
<th>75/76</th>
<th>76/77</th>
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<tr>
<td>Input loan:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPK fertilizer</td>
<td>410</td>
<td>?</td>
<td>450</td>
<td>460</td>
<td>560</td>
<td>310</td>
<td>690</td>
<td></td>
</tr>
<tr>
<td>S/A fertilizer</td>
<td>–</td>
<td>?</td>
<td>90</td>
<td>140</td>
<td>350</td>
<td>290</td>
<td>460</td>
<td></td>
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<tr>
<td>Other inputs</td>
<td>320</td>
<td>?</td>
<td>240</td>
<td>180</td>
<td>820</td>
<td>1200</td>
<td>490</td>
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</tr>
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<td>750</td>
<td>1740</td>
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<td>60</td>
<td>40</td>
<td>40</td>
<td>150</td>
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<td>140</td>
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</tr>
<tr>
<td>Levies</td>
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<td>210</td>
<td>350</td>
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<td>395</td>
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<td>1120</td>
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<td>2600</td>
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<td>4100</td>
<td>5000</td>
<td>6500</td>
<td>6000</td>
<td></td>
</tr>
<tr>
<td>Net income</td>
<td>4600</td>
<td>1800</td>
<td>2000</td>
<td>8000</td>
<td>2800</td>
<td>4200</td>
<td>3900</td>
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</tr>
<tr>
<td>Net real income in 1976 prices</td>
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<td>5300</td>
<td>4700</td>
<td>5400</td>
<td>3400</td>
<td>4200</td>
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<th>72/73</th>
<th>73/74</th>
<th>74/75</th>
<th>75/76</th>
<th>76/77</th>
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<tbody>
<tr>
<td>Input loan:</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPK fertilizer</td>
<td>330</td>
<td>420</td>
<td>560</td>
<td>550</td>
<td>660</td>
<td>470</td>
<td>790</td>
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<tr>
<td>S/A fertilizer</td>
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<td>120</td>
<td>140</td>
<td>150</td>
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<td>350</td>
<td>400</td>
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<td>520</td>
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<td>1070</td>
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</tr>
<tr>
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<td>60</td>
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<td>50</td>
<td>70</td>
<td>80</td>
<td>90</td>
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<td>Levies</td>
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<td>250</td>
<td>270</td>
<td>400</td>
<td>920</td>
<td>820</td>
<td>290</td>
</tr>
<tr>
<td>Total deductions</td>
<td>930</td>
<td>920</td>
<td>1240</td>
<td>1520</td>
<td>1600</td>
<td>1480</td>
<td>2190</td>
</tr>
<tr>
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<td>Net real income in 1976 prices</td>
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<td>5700</td>
<td>4700</td>
<td>7000</td>
<td>3500</td>
<td>3000</td>
<td>2200</td>
</tr>
</tbody>
</table>

contained only five large farmers, of which at least two were not even operating that year. The rest had withdrawn completely, or in some cases reduced their agricultural enterprise to a much smaller scale, mostly to concentrate on their non-agricultural activities. Table 6 gives a clear indication of the main reason for this.

By 1969/70 the average net income in the Urambo scheme had fallen to 1,800 shs./ha. With large-scale farm organization it could not have been possible to reduce considerably the labour and machinery costs of 15,000 shs. per year for a 10 ha. farm, as estimated for the 1964/65 season. So under these conditions the large farmer with 10 ha. tobacco would have been left with only 3,000 shs. for his family and profit in 1970, which made concentration on the alternative activities in which he had already invested a rather obvious economic choice.
The national political campaign against large-scale use of hired labour in agriculture may have provided a further disincentive for the continuation of the large farms, even though it did not seem to penetrate all that deep into the tobacco growing areas (viz. the large Greek tobacco farms in Iringa). But it did of course make it more difficult for the large farmers to use the same methods as the Ten-acre and smaller farmers to keep the wages paid far below the official minimum salary (see below).

The ordinary established tobacco grower in the early Urambo scheme

According to Schemer the ordinary established growers in Urambo were also expanding their tobacco production rapidly in the early sixties, reaching an average of 2 ha. in the 1964/65 season (which sounds reasonable as the relatively large annual intake of new growers would account for the 1.4 ha. overall average shown in table 3).

Such an ordinary 2 ha. grower on average had a net income around 9,000 shs. in 1964/65, but as he would, apart from 3 family workers, employ 3 full-season labourers at a cost of some 1,500 shs., and have other costs perhaps amounting to 500 shs., his actual family income must have been around 7,000 shs. in a normal year.

These farms were commercialized to the extent, that they did not even aim at being able to cover their basic food needs for the family, not to speak of the labourers they also had to feed, from their own harvests. While the large farms, to utilize their machinery, had as much land under cereals as under tobacco, the ordinary farms divided their cultivated land in the proportions 2:3 for cereals and tobacco, having 2 acres (0.8 ha.) of maize and 1 acre rice (0.4 ha.). At the low yields of that time this may have been enough to cover about half the needs of 3 adult family members, 3 seasonal labourers, and 4 children in a good year. The rest had to be bought, but with the high tobacco prices and the liberal availability of credit, including cash loans, their safety margin must have been big enough to allow the growers in most cases to overcome even a bad year under these conditions.

As both inputs in kind, certain services, such as some tractor-ploughing and mechanized transport, and cash to cover the labour costs were obtained on credit from the scheme, the ordinary growers had little of their own capital invested in the tobacco enterprises. Apart from the usual hand-tools, hoes, machetes, axes etc. the only investment of any significance was the construction of curing barns, of which they would normally own 2–3, representing a total investment of 500–600 shs. Even some of the materials for this, as well as their regular replacement, were, however, credit financed.
Apart from purchase of basic food-stuffs as well as other goods for immediate consumption, the affluence of which was indicated by the mushrooming businesses in Urambo town, the growers used their high incomes for durable goods, such as bicycles, watches, and radios. They would build houses, but often in their home area rather than in Urambo, and direct transfers of money for the consumption of families in the home areas also seem to have been widespread.

Investments were made in small-scale business, such as for instance village shops, both in Urambo and 'back home', while cattle was mainly bought in the home area and kept with the family there.

Finally a very small number of this category of growers, probably those aspiring to move up to a higher category, had joined together in groups to buy a tractor and implements for their common use.

In summary the ordinary Urambo tobacco growers in the early sixties were clearly operating on a scale, organizationally and economically, beyond that of the 'traditional' subsistence producer in the area. But on the other hand they were entirely dependent on the scheme, as an external institution, for the reproduction of their conditions of production and even to a large extent for regulation of their direct production processes, and they were completely incorporated in the commodity circuits of the market economy. In turn they were, in this period, able to draw out a considerable surplus from agriculture for "luxury" consumption and small-scale investments in other sectors of the economy.

The established tobacco growers in the Tumbi scheme

Despite the fact that the Urambo settlers went through a more careful selection process, and supposedly as settlers in an organized settlement scheme operated in a more 'modernizing' context, than their Tumbi counterparts, who remained on their traditional farms and quite easily got a tobacco growing license, the main difference in their behaviour seems rather to have grown out of the different direct regulations in the two schemes.

Most important were the tight hectarage restrictions in the Tumbi scheme, which were again enforced through the credit system.

No large growers were initially allowed to develop, and for ordinary growers a fixed limit of only one acre (0.4 ha.) was not raised officially to two acres (0.8 ha.) until the 1964/65 season – when the actual average had already grown to almost 1 1/2 acre (0.55 ha.) in the previous season. When the limit was raised the actual average immediately increased almost to the new limit, or to 0.73 ha./grower, despite the intake in the same season of
70% new growers compared with the number in the 1963/64 season (which also indicates a much smaller difference between new and established growers in Tumbi than in Urambo).

The established Tumbi growers in 1964/65 had an average 0.8 ha. of tobacco from which they earned a net income around 2,600 shs. With a smaller allowed tobacco area, and less favourable credit terms, very few of them added a full-season labourer to the mean of three family workers per household. About 50% of the growers (incl. first year growers) employed hired labour on piece work rates in times of peak labour demand, while the rest had no hired labour at all. The labour costs for an ordinary grower may therefore be estimated to about 300 shs. – and other costs not yet accounted for would at the most amount to another 300 shs. leaving the grower with a final 2,000 shs. for himself and the family.

This money is likely to have been used mainly for consumption, school-fees, and other household expenditures, while even less than in Urambo was invested in the farm, as most growers in Tumbi had only one barn, and none of them were even part-mechanized. Savings from several good seasons may have been put into village shops and similar small-scale non-agricultural ventures.

While the ordinary established grower in Urambo had a labour force of 6 full-time labourers (3 family, 3 hired) the grower in Tumbi had 3 family labourers supplemented with hired labour for a limited amount of piece work. They also used their labour force differently, as a Tumbi household had less than half the area of one in Urambo with the labour-demanding crops, tobacco and rice, while both had the same area under maize.

Neither were self-reliant in basic food crops, but the deficit must have been much smaller in Tumbi than in Urambo in a normal year.

So, after a few years of tobacco development, the growers in both schemes had been subjected to the demands of tobacco production as the principal and dominating crop – directly in the form of scheme regulations, indirectly through incorporation in commodity circuits outside their control. But the Tumbi households were less completely regimented as providers of labour for the tobacco production process than they were in Urambo. The Urambo grower, on the other hand, to some degree played the role of supervisor of the labour process, and in return he, for his services, received a larger part of the surplus produced by his wives and labourers, while less surplus was retained by the Tumbi tobacco grower.

The tobacco/maize growers of the 1970's

As a result of the adverse price movements after 1965 that type of
The remaining tobacco growers were of course equally hit by the setback, but neither they, nor all the new tobacco growers who continued to join both the old and the new tobacco schemes in the area, had any alternative as 'profitable' as tobacco, even under the new depressed conditions. The economic incentive was still sufficient to maintain the growth in number of growers, tobacco area, and production.

Although quite a few ordinary growers did also quit tobacco and returned to their home areas, most of them responded rather to the changing conditions of production with a changed organization of production. As this happened at the same time as the regulations in the schemes became more similar for ordinary growers, most important through the liberalization of the hectarage restrictions in the Tumbi scheme, now the TTGCS area, the emerging type of enterprise became more or less common for the whole tobacco production area.

The most immediate sign of this was the convergence of the area that ordinary growers in the different schemes had with tobacco, which stabilized at about 1 ha./grower around 1970 (the 1.2 ha. average for Urambo in table...
3 above includes the larger Ten-acre-farmers, see below). Since then it appears that this ordinary one hectare tobacco farm remained largely unchanged, until the growers in some places, for instance Urambo, experienced a major (temporary?) setback at the time of villagization.

Around 1970 the net income from one hectare of tobacco was only 1–2,000 shs. on average (table 6), which meant not only that incomes in general had decreased, but perhaps even more important, that the safety margin had been seriously reduced, which is strongly felt by the producers of a vulnerable crop like tobacco. At the same time they were hit by the reduction or total abolishment of the cash loans, which had earlier helped them to overcome the results of the regularly occurring misfortunes, by enabling them to feed their families and even to continue to hire labour after such a bad year.

The response of the ordinary growers was to limit their tobacco area to one hectare (compared with the earlier two hectares common in Urambo where there were few restrictions); to increase their maize area to more than one and a half hectare (compared with little more than one hectare of cereals earlier); to reduce the amount of hired labour used (from the average 3 full-time labourers in Urambo, see also table 7); and to make new arrangements for getting the labour they did continue to use.

Since 1970 rice growing has almost disappeared, the reason being, so it is said, that the rainfall has been insufficient. On the other hand the use of maize fertilizer has been increasing in the same period, together with the necessary labour inputs as well as yields, so as an approximation the same area of cereals may need the same labour input and give the same output now as it did before.

In that case the change in land-use seems to correspond roughly with the reduction in labour-use to 3 family workers supplemented with temporarily employed labourers, perhaps with a certain increase in the workload of the grower family.

The number of labourers employed for a full season has been vastly reduced, for several reasons: The increased maize area does not demand the same intensity of labour throughout the season as did the tobacco it has

<table>
<thead>
<tr>
<th>Family labour and hired labour, by sample growers²</th>
<th>1964/65</th>
<th>1975/76³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean family-labour force</td>
<td>3.15</td>
<td>3.25</td>
</tr>
<tr>
<td>% of growers stating they use additional hired labour</td>
<td>72 %</td>
<td>43 %</td>
</tr>
</tbody>
</table>
replaced; without the cash loans the growers prefer to pay the labourers at the end of the season, when they get their payments, but most labourers reject this arrangement; the Warundi refugee settlements have provided the area with a local labour force available on piece work terms, which it did not have before; finally there is a certain political opposition to seasonal employment, but no similar aversion against more temporary arrangements.

Instead of seasonal employment, work on piecework terms has therefore increased, and so has a variety of arrangements close to some kind of semi-tenancy (not mentioned as hired labour in table 7). Under such an arrangement a new immigrant to an area cultivates his own fields, but is given tobacco seedlings and inputs by an established grower; who also cures the tobacco once it is harvested and sells the tobacco in his own name. The 'tenant', however, gets the money for the bales he has delivered, sometimes with a deduction for the inputs. The 'tenant' may also receive some maize from the established grower, to feed him until he can start to harvest his own maize. In return for all this the 'tenant' has to do a more or less specified amount of work during the season for the established grower, who has 'helped' him.

For the established growers these kinds of arrangements are cheaper, more flexible, and reduce their risks, as they allow them to concentrate their hired labour in the peak periods and in accordance with the conditions of that particular season, to use some of their credit financed inputs to cover labour costs, and to limit their use of hired labour to what they can afford with already available resources. For the 'tenant' it is often the first step towards becoming an established grower himself, while for the piecework labourer it is nothing but an immediate source of income, however small it may be.

The changed land-use pattern together with the increased maize yields (from an earlier 4-5 bags to 8-9 bags/ha. on average) mean, that the ordinary growers are now self-reliant in basic food even in fairly bad years, which are of more significance to them than some 'average year', as it is in the bad years they can no longer rely on the tobacco income even for the mere survival of the family. In good years the area can be relied upon as a surplus producer of maize.³

The net income/ha. has increased since 1970 from 1,000-2,000 shs. to 3,000-4,000 shs. in the last years, but this has only been just enough to keep pace with general inflation, so in real income terms the situation has remained unchanged.

To sum up, the major argument above has been, that in response to the depressed conditions of tobacco production after 1965 the ordinary growers
in Tabora maintained a certain – although for many reduced – level of tobacco production while they changed the organization of production, so that it became less dependent on involvement in commodity circuits for its own immediate reproduction. In this way they were still in the long run dependent upon their tobacco incomes, but they became able to survive and maintain the family production unit with a relatively much smaller remuneration for that part of their labour which was used in tobacco production, than was earlier the case.

"Mateneka" – or Ten-acre-farmers

In the wake of the decline of the large farms after 1965 a different category of larger than average farmers were ascending to the most prominent position among the tobacco growers. Consisting of the top layer of the ordinary established growers together with some of the former large farmers, they were qualitatively different from the latter with regard to such essential features as the type of labour process and mode of economic operation employed, which by contrast were entirely embedded in the social
and economic patterns of a fairly prosperous, commercialised peasant community.

Their emergence as a predominant group in spite of the generally adverse trends of tobacco production was precisely conditioned by the decline of the large farmers and their own ability to function from within the peasantry, only quantitatively on a slightly larger scale than the average tobacco grower. Initially this favoured position was further enhanced by a change in the credit-system, from which also the formal concept of a Ten-acre-farmer ("mateneka" in Kiswahili) derives.

Both the NDCA and the cooperatives were by then adhering to the dominating “progressive farmer” idea, and when the large and medium farms were disappearing a new regular system of favouring the larger than average established tobacco growers was introduced – at first in Urambo, where the majority of them were already located. Such growers, recognized as having grown more than 2 hectares of tobacco for some time, would be registered as Ten-acre-farmers (TAFs – pronounced 'tough'), which did not only give them the right to a larger cash element in their loans, but also to obtain this loan for at least 4 ha. (10 acres) even if they would subsequently grow only 2 1/2 or 3 ha. tobacco. Later a somewhat similar, but less organized and regular system was also introduced in the TTGCS area, where it never got time, however, to have the same effect as in Urambo.

The larger farm size of the TAFs very often originated from their larger than average families, which they had established during the good tobacco years, or even later after two or three years of exceptional luck. On this basis they would operate tobacco/maize production enterprises very similar to those of ordinary growers, only correspondingly larger. But then their extended economic base, and especially the big cash loans they could obtain, gave them more room for maneuvering, for instance in the informal "labour market", using a variety of "tenant", piece work, and seasonal work arrangements. They also had better opportunities to participate in the illegal – market for fertilizers, where tobacco growers sell maize fertilizer (S/A) at a higher price than they have paid for it to non-tobacco-growing peasants, who cannot get it from the official channels, and where wealthy growers with available cash can buy cheap tobacco fertilizer (NPK) from their poorer counterparts, who are in need of cash early in the season and have acquired the fertilizer on credit.

Increasing cash loans could also add to small investments in shops, means of transport, or maize mills in the villages. With very limited fixed capital and no regular wage labour force, their agricultural enterprises were thus very flexible, enabling them to use almost any occasional opportunity to make a 'fast profit'.
But with the falling tobacco prices and their dependency on the large short-term credit, on the basic labour of their families, and on a certain level of income from their tobacco farm, the TAFs were also more than usually vulnerable to any misfortune, in the tobacco, in the family, or in business. Having obtained the large loans early in the season, many barely managed to break even at the time of tobacco payments, i.e. their debts swallowed their total tobacco incomes. But this meant that in the bad years 1970 to 1972 a large part of the TAFs actually accumulated uncovered debts, making the abolishment of cash loans in the 1972/73 season an economic disaster from which a lot of former TAFs never really recovered.

Even since 1973, when the TAF category was also officially abolished, there are still, however, a part of the tobacco growers, who conform to some extent with the above description. But their position has been under continuous pressure. Villagization forced many of them to abandon their old farms in order to start opening new land and build new houses and curing barns in the new village settlements. Restrictions have been put on seasonal migration from other regions and thereby on the labour supply. "Operation maduka", which closed most of the private village shops in 1975/76, and the subsequent support to cooperative shops has robbed them of their most important supplementary economic activity. The abolition in 1976 of the cooperatives, in which they were often dominating, took away an important power base. The block farming system, which is now being introduced in many villages, facilitates control with the many minor irregularities from which they could formerly take advantage.

Consequently these enterprises, apart from their slightly larger scale, differ less and less in their mode of operation from the farms of the ordinary established tobacco growers, and at the same time the mobility, both ways, between the two strata is increasing, indicating the eradication of any marked qualitative dividing line between them.

We have no reliable statistics giving the number and sizes of these larger than average farms, but in table 8 some available indicators are presented.

As the number of curing barns owned is technically related to the area cultivated with tobacco the three columns in 8(i) and 8(ii) should correspond roughly – perhaps with a slightly inadequate barn capacity in 1975176, the year after villagization. The table therefore demonstrates the earlier mentioned difference between the two old schemes in 1964165, and that from consisting of almost 20 % of the growers in Urambo versus nil in Tumbi the larger than average grower category now comprises about 6–7 % of the growers in the whole tobacco area. At the same time there has been a general downward trend in the size of tobacco farms, including the average farm size within each of the three categories shown in the table, as e.g. 2 %
Table 8. *Indicators of differentiation among tobacco growers*

(i) Distribution of sample growers by ownership of curing barns

<table>
<thead>
<tr>
<th></th>
<th>1 barns</th>
<th>2 or 3 barns</th>
<th>4 barns or more</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1964/65 growers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urambo (N=64)</td>
<td>9%</td>
<td>72%</td>
<td>19%</td>
</tr>
<tr>
<td>Tumbi (N=61)</td>
<td>46%</td>
<td>54%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>1975/76 growers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>whole area (N=28)</td>
<td>61%</td>
<td>32%</td>
<td>7%</td>
</tr>
</tbody>
</table>

(ii) Distribution of all growers in 3 sample villages by stated tobacco hectarage, 1976/77

<table>
<thead>
<tr>
<th>Village</th>
<th>Below 1 ha.</th>
<th>1–2 ha.</th>
<th>More than 2 ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village I</td>
<td>56%</td>
<td>42%</td>
<td>2%</td>
</tr>
<tr>
<td>Village II</td>
<td>51%</td>
<td>39%</td>
<td>10%</td>
</tr>
<tr>
<td>Village III</td>
<td>38%</td>
<td>56%</td>
<td>6%</td>
</tr>
</tbody>
</table>

(iii) Registered Ten acre farmers 1971

<table>
<thead>
<tr>
<th></th>
<th>TAF's as % of all growers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urambo (TTGCS area)</td>
<td>6–11%</td>
</tr>
</tbody>
</table>

out of the 20% with more than 4 barns in Urambo in 1965 were the large mechanized farms with 10 ha. of tobacco or more, while hardly any grower has more than 8 ha. today and most of the larger than average growers have 2 1/2–3 ha.

For the intermediate period the only figures we have are some official lists of registered Ten-acre-farmers from 1971. In both the Urambo society's register of actually operating TAFs for 1971/72 and in a revised list of recommended TAFs from the NDCA the preceding year there appear 145 names of tobacco growers from the Urambo area, or about 6% of the total number of growers in the area at that time. The NDCA list further indicates their approved hectarage, ranging from 2 1/2 to 20 ha., with an average of 5 ha. A number of perhaps less stable, or upcoming, growers would, however, be turned down as formally registered TAFs, but would never-the-less grow more than 2 ha. of tobacco. So the actual number of growers in this category must have been somewhere between the 145 given above and the 282 TAFs which the Urambo society in their loan application for 1971/72 estimated would be growing an average 3 ha. of tobacco each.
In the TTGCS area only 50 TAFs seem to have been registered, which is, however, likely to be due to the less rigorously operated system there, rather than to a size distribution significantly different from the one in Urambo at that time.

All this suggests therefore that the proportion of larger than average growers may have developed from 20% and nil in Urambo and Tumbi respectively in 1965 to 8–10% in the whole area in 1971 with a subsequent decrease to some 6–7% in 1976, coupled with a simultaneous drop in mean farm size within the category. It ought, perhaps, to be added, that this suggestion is supported not just by the admittedly feeble statistical evidence given above, but also by estimates made by informants in the field.

The non-tobacco growers in the tobacco areas

Compared with our knowledge about the tobacco growers in Tabora and Urambo Districts we have much less information on the people in the tobacco areas, who for some reason did not join the "tobacco rush", and have not done so to this date. Especially the hard quantitative data are scanty, inconsistent, and unreliable indeed.5

Subsistence agriculture and outmigration of labour.

Before the introduction of tobacco into the area the vast majority of the population was engaged in shifting, slash and burn cultivation of crops for subsistence consumption. A wide variety of crops were grown, e.g. millet, maize, paddy, groundnuts, beans, sweet potatoes, cassava, and vegetables. These were further complemented with livestock products and hunting and gathering. Already then the ordinary household, the production unit, was fairly small, consisting of 4–5 people, and the households were scattered in loose clusters of 5–50 households each.6

Table 9 shows the mean cultivated areas and mean incomes of a small sample of non-tobacco growers in Tabora District (incl. the present Urambo D.) in 1964/65, when tobacco production in the area had not yet had much impact on the majority of "subistence" peasants.

The cultivated areas seem too small to have provided even the minimum necessity of food in years with small harvests, which also demonstrates the importance of complementary herding and hunting and gathering. Monetary penetration into rural production was still in its infancy, and small surpluses of livestock products, vegetables, honey, etc. were the most important items for cash sales.

The Wanyamwezi, the main tribe of Tabora Region, have, however, for a long time been deeply involved in the monetary economy as workers
Table 9. Cultivated areas and incomes in 'subsistence' farms in Tabora District 1964/65

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Main crop ha.</th>
<th>Interplanted crop ha.</th>
<th>Cash income shs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>0.9</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Rice</td>
<td>0.2</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>Cassava</td>
<td>0.1</td>
<td>0.4</td>
<td>-</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>-</td>
<td>0.6</td>
<td>-</td>
</tr>
<tr>
<td>Livestock</td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Vegetables and products from hunting and gathering</td>
<td></td>
<td></td>
<td>90</td>
</tr>
<tr>
<td><strong>Gross income, annually (N = 16)</strong></td>
<td></td>
<td></td>
<td><strong>165</strong></td>
</tr>
</tbody>
</table>

outside their home area. It is reported that already by the end of last century between 100,000 and 200,000 men from "Greater Unyamwezi" (including the Wanyamwezi, the Wasukuma to the North, and some smaller, surrounding tribes) went annually to the coast to enlist as porters for the caravans, most of which passed through Tabora on their way to the interior. According to the source this would be as much as 10–20% of the total population (or a much higher percentage of adult males) in the areas involved.8

The 1957 census showed that some 45,000 Wanyamwezi or 15% of the tribal population were staying outside their tribal territory and surrounding areas9 and in 1967 the comparable figure was even 20%10, a large part of whom were migrant, seasonal labourers, e.g. on the sisal estates along the coast, while some also contributed to the more stable labour force in Dar es Salaam, in the Zanzibar clove production, on the railway, etc. All of them helped further the penetration of the monetary economy also into their rural home areas.

So for the large majority of those 90% of the households, who did not yet grow tobacco in 1965 the situation must have remained largely unchanged. But the impact of the tobacco schemes was increasingly felt on a larger scale.

**Tobacco labourers**

Around that time – 1965 – some 5,000 labourers would find seasonal employment directly on the tobacco farms, especially in the Urambo scheme. Although probably the majority were migrant labourers from other regions, there would also be a significant number from within Tabora
District itself. Many labourers, both local and from other regions, have later brought in their families and settled as tobacco growers, after 2–5 years of seasonal labour.

In more recent years the labour movement between regions has been restricted, but at the same time an alternative source of cheap labour was opened with the establishment of the large refugee settlements for people from Burundi, who do not seem eager to involve themselves as tobacco growers (most probably because they still regard themselves as only temporarily settled in Tabora, and tobacco demands a longer time perspective than food crops, in terms of the necessary learning process, barn construction, etc.). For cash incomes therefore they rely rather on temporary employment and/or on growing maize for sale.

The growing number of small tobacco farms has also meant, that more people, who are themselves tobacco growers, seek occasional work on piecework terms to overcome an immediate need for cash.

The emergence of these two sources of labour does not mean, however, that migrant labour from other areas has been completely replaced by them. Only its proportion of the total labour force has decreased.

Quantitative figures on the present size of the hired labour force are hard to come by, but the sample survey showed that 43%, or about 10,000 tobacco growers used hired labour in the 1975/76 season. Of these only a small minority could have employed one or more labourers for the whole season, the rest offering short-term employment for piece work only. Many labourers therefore must have worked for several tobacco growers during the season, while others were only employed for a limited part of the season. Consequently the absolute number of people engaged in wage labour could not have been much larger in 1975/76 than the 5,000 it was estimated to be 10 years earlier, especially if those who were primarily tobacco growers themselves are not included in the figure. In the same period the total number of tobacco growing families rose from 3,000 to 23,000.

The burden of reproduction of the tobacco labour has thus – to some degree at least – shifted from the migrant labour families in more depressed areas to the family labour of the tobacco farms themselves, as also demonstrated by the increased proportion of land used for subsistence crops.

Production for sale to the tobacco growers
The same trend towards self-sufficiency and self-containment among the tobacco growers can be seen in other fields of activity. In all four sample villages tobacco growers were encountered, who in the 1960's and even later
had been engaged in production of inputs for the tobacco growers in the area, rather than being growers themselves.

In the West, especially in and around the new tobacco scheme at Kaliua, there appears to have been a flourishing production of rice for the local market, and many immigrants settled in the area in this period specifically to grow rice. In Kaliua, but also in the Urambo scheme, the rice growers often borrowed "mbuga" (wet season swampland) from tobacco growers, to whom it had been allocated as part of their 15 ha. plots, but who could not use this land-type in their tobacco-maize rotation.

Rice was sold on the local market, but quite a significant surplus was marketed outside the area by the cooperatives, e.g. around 500 tons per year from the Urambo scheme alone.'1

In the 1970's, however, paddy has virtually disappeared as an important crop, according to former rice growers because there has been too little rain, starting with the very dry 1970/71 season, when much planted paddy failed. One would expect that also the increased self-sufficiency of the tobacco growers and the resulting weakening of the local market has had an impact, since the officially marketed surplus was only affected after a couple of years of falling production.

In the last few years the marketed surplus has been negligible, and in 1975/76 the total production for Urambo District was estimated at less than 500 tons12 (or the same quantity as the officially marketed surplus in the 1960's just from that quarter of the district covered by the Urambo cooperative).

Many former rice producers now grow tobacco, although some of them at first tried to switch to maize. Maize was, however, less profitable. For the non-tobacco growers it was difficult to obtain fertilizers at a reasonable price, as they had to buy it from the tobacco growers, and also to get maize land within the schemes, where the tobacco growers were using this land-type in their own rotation.

Contrary to the trend for rice, increasing quantities of maize are now sold through official channels (presently the National Milling Corporation, NMC). Several factors would seem to contribute to the explanation of this tendency.

Amongst the food crops there has been a general shift from rice to maize, so that any surplus grains, which were formerly disposed of through sale of rice, must now appear as marketed maize. Maize yields have gone up due to a vastly expanded use of fertilizers (in 1976/77 reaching a level where the quantities distributed13 were enough to cover 0.5 ha. per household, incl. non-tobacco growers, in the Urambo scheme and 0.6 ha. in the TTGCS area at the officially recommended rate of 2 bags (a 50 kg.) per acre (0.4 ha.) and twice as much at an estimated actual application rate of about 1 bag per acre).

While the rice growers within the tobacco schemes turned mainly to
tobacco after 1971, their place as commercial grain producers was to some degree taken over by the refugees from Burundi. Finally the tobacco growers are now, as we have seen, aiming at a high degree of self-sufficiency, even in bad years, resulting in frequent surpluses also among them, and therefore in a change in emphasis from the local market for grains to markets elsewhere in Tanzania, which are more and more strictly monopolized by the official marketing parastatal, the NMC.

So to summarize, the number of people engaged in specialised, commercial grain production as an input to tobacco production has declined after an initial growth in the 1960's. Apart from the refugees and people in the most distant parts of the region, those relying on food crops as their main source of income would now consist largely of the old and disabled, single worker households (e.g. divorced women), or young or immigrant households in their very initial establishment phase, all with very low cash incomes.

In the tobacco schemes there were also other households, who for a long time deliberately remained outside direct tobacco production, growing only subsistence food crops, but earning a cash income by performing specialized tasks more or less directly connected with the predominant tobacco economy.

They might be cattle herders, often Wasukuma coming down from the North, who had settled more or less permanently with their cattle to benefit from the high demand for meat and the good grazing in the forests, which were not too infested with tsetse in and around the tobacco schemes. There were "pombe" (local beer) brewers, buying maize husks cheaply in the villages and importing the necessary sorghum from other areas. Wood-cutters, who cut firewood by order and on per-cubic-meter terms for the tobacco growers. And a few craftsmen such as carpenters and bicycle repairers.

Other trades, maize mills, markets and shops as well as services, e.g. schools, dispensaries, cooperatives, were concentrated in a few scattered towns and trading centres, which were therefore often visited by the peasants, riding in on their bicycles in the morning and leaving for home in the afternoon with their bagage carriers loaded with maize-flour, cooking oil, kerosene, sugar, salt, maybe a "khanga" (multicoloured printed cotton cloth used by the women), batteries, etc.

Since villagization it is government policy that everybody in the villages in this area must grow tobacco, with the exception of some of the cattle herders, who have been settled in separate sub-villages attached to the ordinary tobacco villages. It is also part of the new village policy, however, that the villages will be able to establish for example local cooperative shops
and maize mills, which the villagers will take care of besides their work as tobacco growers.

It is clear therefore that the general development of the tobacco economy has tended towards a declining degree of division of labour at the local level, of local exchange relations, and of differentiation involving specialization and exchange. On the other hand we have seen how the whole population is gradually becoming directly engaged in the external exchange relations connected with tobacco production.

The resulting uniformity may well, especially together with the effects of villagization, facilitate a more intense political-administrative control over the whole production and economy of the area, as we shall also see in the following chapter.

Notes

1. Per hectare calculation of Table 5 (and therefore based on the same sources, see Chapter II, note 8). For hectarages used see Tables 3 and 4. As these hectarages were estimated on the basis of the amount of NPK distributed it is not surprising that with constant NPK prices 1972/1973 to 1975/1976 (because of the subsidy) NPK costs per hectare should be constant in that period, with the exception that (for reasons explained in notes 6 and 7 to Chapter II) for the last two seasons the constant is the mean of the two seasons taken together. Other small variations are due to rounding of the hectarage estimations. In the 1976/1977 season the price of NPK was raised from about 50 to 70 shs. per bag, so this represents a real cost-increase.

2. Sources:
   a Schemer op.cit., pp. 84–85.
   b Sample survey by TRDB staff, A.T. Mohele et al.

3. After the 1977 harvest the National Milling Corporation has bought large quantities of maize from villages in Urambo District, which shows a surplus over and above what can be absorbed by the local markets.

4. Sources:
   a Schemer, op.cit., p. 88.
   b TRDB sample survey.
   c Village records. Growers' own statements, modified for the general tendency to underestimate in order to conform with fertilizer recommendations, so that 1 ha. in the table is 2 acres (0.8 ha.) in farmers' statements.

5. For example two different official sources on total maize production in Tabora (incl. Urambo) District overlap for 1972, in which year it was 28,000 tons according to one and 80,000 tons according to the other. This alone indicates that neither of them, nor other official crop statistics can be used with any safety, not even as approximations. (One is quoted here from a World Bank report, the other from a Swedish consultancy firm's report, both specifically on Tabora Region).

9. Ibid., p. 15.
11. From files of the Umoja wa Wananchi wa Urambo (UWA) African Producers Cooperative Society.
12. Information from District Planning Officer, Urambo.
13. Calculated from TRDB Loan Disbursement Statements and Stock Balances for the two societies.
CHAPTER IV.

Ujamaa, "Tobacco Complexes", and Villagization

Ujamaa Villages

The ujamaa village policy was introduced as a policy to be implemented throughout Tanzania by government and party institutions in the years immediately after the Arusha Declaration and the publication of the policy paper on "Ujamaa vijijini" ("Rural socialism") in 1967.1

Ujamaa villages were propagated as villages where "people would live and work together for the benefit of all" and where there would therefore be "no exploitation of man by man".2

1968-72 was the height of the ujamaa policy period. All over the country government and Tanu leaders were busy encouraging establishment of ujamaa villages, and a large proportion of rural government budgets and services was concentrated on this sector in those years.

In the tobacco areas in Tabora Region, however, very few ujamaa villages were started until implementation of the 'Tobacco complex' programme began in 1971.

"Jionee Mwenyewe" was the only ujamaa village in the Urambo area3. Unlike most ujamaa villages in the country it was started on the initiative of its members rather than by government officials, it was small, and it was politically quite advanced. After the Arusha Declaration a few people had taken the initiative to begin discussions of the ujamaa policy among the tobacco growers in one of the sections into which the Urambo scheme was divided. After several meetings 28 householdssigned a request to be allowed to establish an ujamaa village. The request was approved by the district authorities and about 700 ha. of uninhabited forest were surveyed and laid out for the village.

In August 1968 17 families moved to the new village, and they all remained together throughout the six years it existed. The remaining 11 of the 28 originally registered households had lost the spirit when it came to the actual move. Among the 17 member households there were a couple of former larger farmers, while the rest were ordinary peasants. Later they were joined by 5 new families, so in the end they were 22.

The members of Jionee Mwenyewe must clearly have been motivated by
the ujamaa ideal "to live and work together for the benefit of all" in a simple and straightforward way. Most of the work in the village was organized collectively, as all tobacco and maize was grown on communal fields, while each family had only 1 acre (0.4 ha.) for their house and vegetable garden. All members, men and women, took part equally in the collective work and decision-making. Even preparation of food and eating was done communally, with maize supplied from the village store and vegetables from individual members' fields. In this way the old, the new-comers, and the children were also taken care of by the village.

All took part in adult education 3 days a week, where they did not just learn to read and write, but also studied the ujamaa policy and discussed problems of the village.

Most of the harvested maize was kept in the village store for food throughout the year. The incomes from tobacco and in the first two years from surpluses of maize, which were sold, were normally divided so that about one half was used for communal investments, e.g. a chicken farm, and consumption, while the other half was distributed among the members (men and women!) according to their participation in the communal activities.

The ujamaa village got a lot of material support from the district and regional authorities in Tabora. The first three months after establishing the village they got free food from the government and again in 1972/73 when they were in trouble after the dry years 1970–72, they got government food aid.

Initially the village had been supplied with hand tools, and a government tractor ploughed a 4 ha. maize field for them. Later they got a maize mill, 2 groundnut shellers, an oxteam with plough and trailer, a gun, a radio, and last but not least piped water (at a cost of some 150,000 shs.). The village had its own agricultural extension officer, and at one time 6 university students were stationed there for 6 months to help and to learn from the "wajamaa" (ujamaa villagers).

In 1971 Jionee Mwenyewe won the regional prize of 16,000 shs. as the best ujamaa village. The money was used to cover a deficit on its tobacco account that year and to construct a baling shed.

Locally the ujamaa village was, on the other hand, met with both open and covert opposition. It was only after intervention from higher authorities that the scheme's leadership in Urambo approved the village site the members had chosen, and which had already been surveyed, as feasible for tobacco growing. Similarly the cooperative in Urambo, UWA, needed a government order before the village could obtain credit as a collective and not as individual growers. They never succeeded though, in being allowed
Table 10. Development of Jionee Mwenyewe Ujamaa Village

<table>
<thead>
<tr>
<th></th>
<th>69/70</th>
<th>70/71</th>
<th>72/73</th>
<th>73/74</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of families</td>
<td>19</td>
<td>20</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Ha. tobacco</td>
<td>8</td>
<td>7.2²</td>
<td>1.6⁶</td>
<td>4.8</td>
</tr>
<tr>
<td>Ha. maize</td>
<td>13</td>
<td>6.4</td>
<td>13</td>
<td>6.4</td>
</tr>
<tr>
<td>Tobacco value, '000 shs.</td>
<td>27</td>
<td>10</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Tobacco ha./family</td>
<td>0.4</td>
<td>0.4</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Value shs./ha.</td>
<td>3400</td>
<td>1400</td>
<td>3000</td>
<td>2900</td>
</tr>
<tr>
<td>Shs./family</td>
<td>1400</td>
<td>500</td>
<td>200</td>
<td>600</td>
</tr>
<tr>
<td>Maize ha./family</td>
<td>0.7</td>
<td>0.3</td>
<td>0.6</td>
<td>0.3</td>
</tr>
</tbody>
</table>

² Crop failure in fields after transplanting  
⁶ Crop failure in seedbeds before transplanting

to deal directly with TAT as a separate cooperative. Last but not least it is reported how especially the larger farmers and the local bureaucracy (in government, cooperative and TAT) were obstructing the ujamaa village by spreading false rumours, e.g. that all government support was on credit and would have to be repaid, by abusing individual members when they moved around, or by offering them jobs as labourers, thereby tempting them to withdraw from the village in periods of detrimental conditions.

Finally at the time of villagization in 1974, Jionee Mwenyewe was chosen as the site of one of the new, larger villages, and despite appeals from the "wajamaa" they were not allowed to remain a separate ujamaa village. They even had to leave their houses (and part of the water-pipe system) as they would be just outside the planned housing area of the new village. Again it is recalled how the major opponents were the larger farmers (of whom about 10 were to join the new village), headed by the local TANU chairman, who was then one of their kind, and by the divisional secretary.

So the ujamaa village was dissolved, most of its members left the area while only two remained in the new village, and Jionee Mwenyewe is now an ordinary "planned village", with no collective activities in the productive sectors.

Economically the ujamaa village never got time to prove if it was a viable enterprise. Table 10 shows that after a reasonably good start in the first two years, 1968–70, it ran into great economic problems.

The two-year drought in 1970–72 did, as we have seen, hit everybody in the area, but it certainly underlines the political strength of the ujamaa village, that it was able to survive such an economic setback with its membership and collective organization intact, even if it was also supported
economically by the government and by the possibility to leave unpaid input-loans for repayment in the following years.

Even the 1972/73 season was a bad one for Jionee Mwenyewe as it was decided at the end of the 1971/72 draught season to move the whole village temporarily to an abandoned large farm 25 km. away while they awaited finalization of the construction of a water supply system in their own village. In the new place however it turned out that the fertility of the soil was exhausted and that it was infested after many years of tobacco cultivation, so in the middle of the season the "wajamaa" started to move back again, all accounting for a third bad year in a row.

It was only in the 1973/74 season, therefore, that the ujamaa village had again begun to recover economically, only to find itself dissolved at the end of the season.

"Tobacco Complexes"

In 1971 the IDA financed flue-cured tobacco project was introduced in Tabora Region with the establishment of four new "Tobacco complexes", Igagala and Uyowa in Urambo District and Kitunda and Mibona in Tabora.5

The "Tobacco complexes" differed sharply from the older tobacco schemes both with regard to settlement pattern and organization of production.

Each of the four "complexes" were supposed to consist of 10 villages located fairly close together. A village would have a population of about 100 families settled in a compact village with plots of only one acre (0.4 ha.) per family for their houses and vegetable gardens within the village itself. The tobacco and maize fields were to be situated around the village settlement.

All the villages shared a common "complex"-headquarter with office buildings, storage facilities, workshop, etc., while two or more villages shared other services such as schools, dispensaries, water supplies, agricultural extension officers, baling sheds, etc. Construction of such services (including roads) was undertaken right at the beginning of project implementation, the costs being part of the IDA project financing.

Igagala Complex in Urambo District for example was located in formerly uninhabited forest on the old German road leading West towards Kigoma from Kaliua. Here the villages were placed as beads on a 20 km. long string along the road, which had been renovated for this purpose. In each village the houses were built in rows adjacent to the road, with the fields behind the rows of houses and between neighbouring villages on the string. (See Map 4, schematically showing the layout of the village Igagala No. 4, Mtakuja).

Apart from the private one acre house and garden plots all production was to be organized on a communal basis in accordance with the principles
of the ujamaa ideology. Each village would make up a complete production unit, and would as such obtain production credit, organize collective work, carry eventual costs, sell the produce, and dispose of the net incomes after deductions for interest and repayment of loans.
As part of the general "complex" investments, the villages were provided with huge communal curing barns, with handtools and seeds, with a certain amount of tractor service for ploughing, and in some cases with bulldozers to clear the forest.

This collective organization of production was, however, only maintained in the "complexes" for two years, i.e. the 1971/72 and 1972/73 seasons, after which it was broken up into a "block farming system", where large "blocks" of land are still laid out and designated for certain crops, but are then divided into one acre (0.4 ha.) plots to be distributed to and cultivated by individual households.

The original settlement pattern was, on the other hand, retained, resulting in a situation where the settlement pattern is one feasible for large-scale communal production, while the production pattern is individualistic, favouring a physical set-up where each household has its own fields close together around the house and curing barn, which should again be near the forest (Map 4 also shows the "block farms" and the scattered plots of 10 individual households).

The immediate effect of this contradiction is clearly to make it more difficult for the production unit—the household—to maintain a general overview of its production processes and planning, thus placing further stress on its managerial capacity, and to increase the labour time used in moving people and goods to, from and between the places of work, i.e. house and curing barn, fields, and forest (firewood).

At a more basic level it weakens the relation between the production unit and its most important means of production, the land, by placing the relationships somewhere between the organic unity of the family and its land in the peasant farm, and the common, democratically organized, control of the collective over its land. In this situation it is easy for the external authority, government officers and scheme personnel, to acquire a decisive function with regard to access to land, its distribution, and its use, resulting in a corresponding feeling of lack of control and insecurity on the part of the immediate producers.

It also adds to this tendency towards alienation, that the concentrated settlement pattern and the block farming system facilitates the imposition of a system of stricter control and supervision by the "complex" personnel over the work processes and methods employed by the peasants without necessarily improving labour productivity.

Table 11 shows the development of tobacco production in two of the "complexes" in Tabora Region since their start in 1971.

The output per grower was very small in the first two years with collective production. In the second year neither of the "complexes" showed much
Table 11. Development of tobacco production in two "complexes": Igagala, in Urambo, and Mibono, in Tabora District

<table>
<thead>
<tr>
<th></th>
<th>Igagala</th>
<th>Mibono</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>71/72</td>
<td>73/74</td>
</tr>
<tr>
<td>No. of families</td>
<td>406</td>
<td>1450</td>
</tr>
<tr>
<td>No. of tobacco growers</td>
<td>58</td>
<td>267</td>
</tr>
<tr>
<td>Ha. tobacco</td>
<td>24</td>
<td>117</td>
</tr>
<tr>
<td>Production tons</td>
<td>11</td>
<td>75</td>
</tr>
<tr>
<td>Value '000 shs.</td>
<td>58</td>
<td>507</td>
</tr>
<tr>
<td>Ha./grower</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Kg./ha.</td>
<td>460</td>
<td>640</td>
</tr>
<tr>
<td>Shs./kg.</td>
<td>5/30</td>
<td>6/80</td>
</tr>
<tr>
<td>Shs./ha.</td>
<td>2400</td>
<td>4800</td>
</tr>
<tr>
<td>Shs./grower</td>
<td>1000</td>
<td>1900</td>
</tr>
</tbody>
</table>

* Excluding one village, where only a handful of peasants had started to produce tobacco, and with insufficient statistics.

...difference from the first year as quoted in the table, except that the number of tobacco growing families increased, with a more or less proportionate increase in the other absolute quantities.

The "complex" villages could hardly repay their input loans, and in 1972/73 the authorities distributed money from the Regional Development Fund to give the people in the "complexes" at least a minimum cash income, and thereby secure the mere survival of the "complexes".

It is clear that in Mibono the reason was the very small area cultivated per family, but also in Igagala it seems that the low output was primarily caused by a lack of labour effort, here mainly affecting the quality of harvesting and processing and resulting in low yields, since part of the cultivation was undertaken by "complex" tractors.

Obviously such "laziness" is connected with a lack of feeling of any strong relationship between the individual labour effort, the end-product, and the reward the individual receives, in a situation where there is neither a system of rating the actual work done – but just a recording of the number of nominal working days – nor any communal spirit or political awareness, which could hardly be expected to exist in a scheme predominantly conceived and directed by external, government, authorities.

In the four crop seasons since communal production was abolished the average tobacco area per grower has remained stagnant at just about 1 acre or 0.4 ha. This is partly because of the rapidly increasing number of growers. But even a sample of well established growers from one of the first villages...
to be established at Igagala gave an average of only 0.6 ha. of tobacco in 1976/77, and 50% of the sample had not moved beyond 0.4 ha. Only one household had slightly more than one hectare with tobacco. It appears therefore that not only the average, but the whole distribution curve was depressed in the "complexes" as compared to the older schemes.

Yields vary from year to year and from place to place, but there is no general tendency that they should be significantly different in the "complexes" than elsewhere.

Table 12 compares tobacco costs and income data from Mibono complex and Urambo and TTGCS areas in 1973/74, the last year before villagization. It was a year with relatively low yields in Mibono and high yields in the TTGCS area, so the differences shown in gross income per hectare are not remarkably big. But despite its smaller output, Mibono had the highest costs of inputs per hectare, which means that the inputs here took about 37% of the gross income compared to 19% and 21% in the two older schemes.

This result of tighter scheme control, which does not leave room for the individual grower's flexibility, not only reduces the average net income in the "complex", but it also increases the insecurity and adds another disincentive to putting too much emphasis on tobacco expansion in the "complex" household farm.

Maize hectarage and production, on the other hand, in Igagala shows a pattern more similar to the one in the old tobacco areas, perhaps even with a tendency to put more emphasis on maize in the last couple of years, when the maize area has increased much faster than tobacco cultivation.

In the sample of established growers in Igagala the mean area of maize cultivation was 1.6 ha. in 1976/77 or slightly larger than in the other areas.
With similar hectarages in 1975/76 the yields varied between 12 and 25 bags per hectare leaving almost every family with a surplus for sale. The relatively high yields are probably the result of the combined effect of a higher priority given to maize in the production process, of more maize being grown on rather virgin land, and of a more widespread use of improved seeds distributed by the "complex" authorities, all in comparison the older schemes.

There is no doubt, that in the last few years, when the producer price for maize has more than doubled compared to the early 70's, while tobacco has only gone up by 50%, maize yields as high as 20–25 bags per hectare would begin to make maize competitive with tobacco as a cash crop proper and not just as a basic food crop and supplementary cash crop.

With a 20–25 bags/ha. yield, a price of 72 shs./bag (NMC 1976) (sometimes even increasing to 90 shs./bag in the local market), and input costs of not more than 200 shs./ha., the net income (return to labour) could be as high as 1–2,000 shs./ha. This compares favourably with one ha. of tobacco, which may give a net income of 3–4,000 shs., but has a bigger risk factor, and demands much more labour.

In chapters II and III it was shown how the ordinary tobacco growers in the old schemes tended to become increasingly self-sufficient in maize production with a corresponding reduction in average tobacco area between 1965 and 1973. The above discussion indicates that under the conditions prevailing in the "complexes" and at the 1976 and 1977 producer prices it may well be an economically sound disposition on the part of the "complex" members to effect a further shift in emphasis from tobacco to maize, making the latter a complementary cash crop and thereby spreading the risk and the labour peaks, at a not much smaller return to labour. Maize furthermore has the advantage that it is not as closely controlled, neither in the production nor in the marketing stage, as tobacco, and it does not demand the same degree of longer term perspective by the producers.

The movement of people into the complexes started at a very slow pace and their output of tobacco was equally lagging compared with initial plans.

The settlers were expected to come from the scattered homesteads in the sparsely populated areas in which the "complexes" were located. The sample survey in Igagalla shows, however, that the few original settlers come mainly from the Kaliua tobacco scheme and its immediate neighbourhood. Most were earlier immigrants from other parts of the country, had been engaged in paddy cultivation at Kaliua, and moved to Igagala as an opportunity to change to tobacco after the failure of rice production in 1971 and 1972.

It was not until villagization in 1974 forced them to move, that the local
people from the outlying isolated places came into the "complexes" in great numbers and started to grow tobacco.

The imposed communal organization of production has not only been blamed for the low output from production in the "complexes", but also for their lack of success in attracting more new settlers. It is interesting however, that among the sample growers in Igagala, who did move in 1971 and 1972, it was precisely the communal organization of production that was mentioned as one of the reasons for joining, as it could help them to overcome the problems encountered especially by small households when they first start to grow tobacco, i.e., lack of experience and insurance against the big risk involved, the initial investments needed, and the necessary minimum scale if tobacco production is to be profitable."

It is reported by the villagers that because of these same problems there was a rather large minority who voted against the proposal, when the Igagala complex members in 1973 decided to change to individual production, and there are still groups who work together in the curing process, using the old communal barns (while others have built their own private barns for individual use). In Mibono it seems that some small groups are still growing tobacco collectively."

There seems to be no evidence, therefore, that it was the communal organization of production in particular which kept the scattered local population from moving into the "complexes" in greater numbers than was actually the case. Rather one might speculate, that these new schemes simply did not answer any immediately felt need, except among groups such as the immigrant paddy growers.

Those among the local population, who wanted to move at all, already had the opportunity to join one of the older schemes, with more developed social, economic and physical infrastructure.

Traditionally the local population was very mobile and the small difference in the distance they had to move would probably not have made much difference.

On the other hand, ujamaa production would not be directly attractive to most of the locals in the same way it was to the isolated, immigrant rice producers, as they would usually know somebody in the old schemes (relatives, clansmen, people from their home area) who were already tobacco growers and with whom they could associate in the initial establishment period.

Others were just not interested in moving, and may even have found small, but quite lucrative, fields of activity in the outlying areas, e.g. fishery in the West at Lake Segara and along the Ugalla and Gombe rivers, or beekeeping in the South.
Villagization
Unlike the ujamaa village policy the national villagization policy was fully implemented and had major implications in the tobacco areas of Tabora and Urambo Districts.

In the dry season of 1974 "operation vijiji" ("vijiji" = villages) was carried through successively in Tabora and Urambo Districts by government and party personnel, including the peoples militia, using all available vehicles, public as well as private, to transport the people and their belongings to the new village sites, planned by the authorities. People in the area recall instances where families had to be removed from their houses by force, and remember many a neighbour who decided to leave the area for good rather than move to one of the new villages.

We have already seen how the "tobacco complexes" were finally filled up at the time of villagization. Elsewhere new villages were designated by government personnel for the concentrated resettlement of the people from a certain area. The resettlement did, however, take different shapes depending on the pre-villagization settlement pattern as well as the stringency with which local personnel implemented the policy.
Again the differences between Urambo and Tabora can be quoted as a typical example.

In the Urambo tobacco scheme the population had been scattered fairly evenly over the area on large 10–15 ha. forest plots, that had been allocated to the individual households. There were therefore few if any pre-villagization concentrations of people. (Map 5 shows a schematic reconstruction of a small section of the scheme).

Here the new villages were located either on the already cleared land of
former European farms, where the farm buildings could be used as village centre, or virtually in the virgin forest. In both cases the village layouts aimed at a concentrated settlement with small house and garden plots around a service centre and with space for "block farms" around the settlement. But in the virgin forest, locations would be chosen for a more or less unmodified
Map 7. Muungano New Village, Urambo District.
(Showing house plot areas, the plots of 23 sample households, and their adjacent block farms. Total app. 360 families.)
implementation of the "ideal" layout, which as demonstrated by the example on Map 6 was very similar to the villages in the "tobacco complexes". Whereas when advantage was taken of the existing buildings of a former European farm, the layout had to pay respect to the natural conditions of that particular place. The latter situation resulted for example in a more dispersed settlement area, as shown on Map 7, implying also a less strict and orderly implementation of the "block farming" principle.

In any case, whether one or the other physical structure prevailed, the people were often moved over fairly long distances, which meant that they had to abandon their old farms completely, in favour of their small garden plots and the "block farms" in the new villages. The remains of houses and barns, that have been burned down, are now commonly seen throughout the forests of the Urambo scheme, preventing the people from "sneaking" back to their old homes.

In Tabora – or in parts of the district at least – both the previllagization settlement pattern and the attitude of the local authorities favoured a more flexible implementation of the policy.

Usually the people in the tobacco areas had continued to live in small "clusters" of more concentrated settlement, each consisting of 5–50 households growing their tobacco on the edge of the cleared land belonging to the families in the "cluster". As the population increased or some of the soil in the "cluster" was exhausted, some of the people might begin to establish a kind of satellite in the forest not too far away, which would later develop into a full, independent "cluster". Map 8 a shows such an old, fairly large "cluster", with satellites under establishment to the North and West. The land of eight sample households is also indicated.

As shown on Map 9 this old "cluster", Mpenge, was at the time of villagization allowed to continue in existence, and was grouped together with a trading centre, Ilolanguru, 4–5 km. from Mpenge, and another old "cluster", Mlimani, another 2–3 km. away, into one new village, Ilolanguru village. The people from a third old "cluster" and from all the small, younger "clusters" in the area were then moved to one of the three sections of the new village. The population of Mpenge for example has thereby increased from about 50 to about 135 households.

The small part of post-villagization Mpenge enlarged on Map 8 b shows how the new settlers were given extremely small plots for their houses on the land of the old inhabitants, who continued to keep the major part as their individual land. No "block farms" have been established, so also those people who have moved continue to use their old farms, in many cases even living in their old houses in the tobacco growing season.

In a way therefore, these people follow a pattern which was also known
Map 9. *Ilolanguru* New Village, Tabora District.
(Showing 3 sections created around *Il.* trading centre, and 2 old clusters, *Mpenge* and *Mlimani*. A 3rd cluster, *Katalali* was abandoned. Total app. 500 families.)

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**Map 8a.**
*Mpenge* traditional cluster, pre-villagization, Tabora District.
(Showing houses and fields of 8 sample households.)

**Map 8b.** *Mpenge* section of *Ilolanguru* New Village, post villagization.
(Showing – enlarged – the allocation of *houseplots* to the 8 households as on map 8a, plus a son, 2a.)
before villagization, i.e. having their main house in the old "cluster", but most of their cultivated land, curing barns, and some shelter to live in during the periods of peak agricultural work, in one of its satellites.

In connection with the "operation vijiji" in Tabora Region it was also decided that all villages in Urambo District and the Northern, Western, and Southern parts of Tabora District should henceforth be tobacco villages, i.e. every household in these villages must become tobacco growers. The decision and the ensuing campaign by government and party personnel have actually resulted in a rapid increase in the number of registered tobacco growers.

In three years since 1973/1974, the last pre-villagization season, the total number of tobacco growers has gone up by almost 70 % and as a proportion of all households in the area it increased from 33 % to 52 %. In the old schemes, Urambo and the TTGCS area, growth has been 50–60 % while it has been several hundred per cent in some of the hitherto more marginal tobacco areas.

The same period has, however, been characterized by a drop in total tobacco production to 80 % of the quantity reached in the 1973/1974 season.

A comparison of the effects of villagization under different conditions shows that in the Urambo scheme there was an immediate decline in the total area under tobacco cultivation in 1974/1975 to less than half the 1973/1974 figure with an even bigger drop in tobacco hectarage/grower, while in the TTGCS area the total hectarage continued to increase, with only a slight decrease in average per grower (due to the rapid increase in the number of growers). In the following two years the area per grower has increased slightly in Urambo to 0.5 ha. compared with 1.0 ha. in 1973/1974. In the TTGCS area there has on the contrary been a slight downward movement in 1976/1977, which is likely, however, to be primarily a result of adverse weather conditions in the seed raising period particularly in this area.

From sample surveys it appears that apart from the very first year after the people were moved the maize area and production were hardly affected in either of the two areas.

Although three years is a short period on which to base any definite conclusions on the results of such a drastic change as villagization was, at least in some places, the trends do seem to be fairly clear.

In Urambo the pre-villagization settlement pattern and the local authorities' interpretation of the new policy favoured movement of the people over fairly long distances and resettlement following the model from the "tobacco complexes" with a subsequent tendency towards establishment also of an organization of production similar to the one found in the "complexes", as described above.
The tobacco growers in the TTGCS area have not been affected by villagization to the same degree, and the production pattern, including the quantities produced, have therefore tended not to change so much from the pre-villagization situation.

If the present conditions are maintained it is likely therefore that the Tabora tobacco areas will also in the future exhibit a disparity of types of organization of production, ranging from the "complex-like" very concentrated settlement with production on a household basis, but organized in "block farms" where production planning, decisions, and even the labour processes are tightly controlled by external authorities; to more traditionally organized peasant communities retaining a higher degree of unity of land, labour and decision making within the single peasant household production unit.

The first type corresponds with a population of more uniform, but productively less dynamic peasant households, compared with a higher degree of stratification and also specialization among the peasant families, resulting apparently in a larger economic output, in the latter situation.

While one aim of the more orderly and controlled type of organization of production is clearly to increase the extractable surplus from peasant agriculture it seems doubtful therefore if this can be justified in terms of present trends in the area.

After villagization

The crucial question, then, of course is if the new organization of production can in the long run facilitate a development of the productive forces, which has so far not emerged among the peasant producers (and certainly not yet in the "complexes" or the new villages either). This would seem to depend mainly on two things:

– Is it possible in the new villages to restore a greater control over the production and its output to the village cooperative in such a way that the direct producers feel that they actually exercise this control, not in the traditional, individual way, but through the collective?

– Is it possible thereby to mobilize their resources, and to ensure that an increasing economic surplus is ploughed back as productive investments, for the development of the village?

The internal organization of the new villages has only very recently started its proper functioning along the lines set up by the government. In accordance with these each village has immediately become the primary marketing cooperative for all the crops produced in the village, it procures
the inputs needed by the individual members, and is collectively responsible for repayment of the input loan with interest.

As such the village will employ village servants, e.g. a bookkeeper, a store keeper etc. It has to participate in production planning for the sake of ordering the inputs needed, and it may accumulate a surplus for investment in common village ventures. An elected village committee is responsible for these tasks.

The critical problem, however, is the development of the rôle of this committee vis-à-vis the authorities, as represented in the village by the agricultural extension officer and at a distance by the whole hierarchy of ward, divisional and area secretaries and their development officers. By making it solely into an instrument for the implementation of their decisions on all important matters, as was often the case in the ujamaa villages, the government and party machineries may easily rob the committee of any chance of becoming the accepted representative of the villagers. In which case it will also have great difficulties in mobilizing resources for a development that is not necessarily felt to be in the common interest of the villagers.

Agricultural production (especially tobacco) in the villages included in the present study has so far largely remained a relationship between the individual growers and the agricultural extension officer, who, on the basis of directives from above, controls and regulates it more or less tightly according to the conditions in the different areas, as outlined above.

But taking over a number of the functions from the former cooperative societies has on the other hand given the village leadership a sphere of operation and especially a financial basis, which is not so obviously within the domaine of the agricultural extension officer, and where the leadership has started to develop a certain independence.

Most important perhaps, is that the former society cess of 50 cents per kilogram marketed tobacco (and similarly for maize) now accrues to the village, giving the village committee a relatively secure income which for the sample villages ranged from 40–90,000 shs. from the 1977 harvest.

As most of the more centralized tasks of the societies are now the responsibility of the TAT, and the villages themselves negotiate employment terms and salaries directly with their employees, they have relatively less necessary expenditures than the societies did. A village that does not have to shoulder too large credit arrears on behalf of individual growers will therefore have a fairly large surplus for communal investments each year. On the basis of this they are furthermore able to take up negotiations with representatives of the banks, the TRDB and the NBC, in order to supplement their own investment funds with bank loans. Apart
from the extra finances such connections also help the committee to diversify its dependency relations, which enhances its own independence.

The sample villages already show examples of village investments, decided upon by their committees, in: school buildings, consumer shops, maize mills, or chicken farms, for some of which they have also acquired bank loans.

Already now there would seem to be scope also for even more production oriented communal investments, the most immediately obvious possibilities being ox-ploughs and – perhaps more important – oxtrailers for transport of firewood, fertilizers, and the harvested tobacco and maize, simple motorsaws for cutting firewood, and establishment of village seed-beds, possibly later with some irrigation facilities, as a reserve for those growers whose private seed-beds fail for some reason. In each case the activity could rest economically in itself, i.e. the growers must pay the village for the services they use, a cost which may then be included in the individual production credit.

In the long run the villages may become strong enough to reduce the agricultural extension officer to his proper rôle as a technical adviser. This would demand, however, that also his or her direct responsibility for implementation of directives from higher authorities be reduced. An important result could be, that the villages started experimental fields, enabling them to change the recommended agricultural practices in accordance with the local conditions and with experiences gained by the villagers themselves in their own trials.

One of the major vices of the cooperatives was the favouritism, corruption and direct embezzlement of money and goods by their staff and office holders. Similar problems may to some degree be prevented in the case of the villages, as the closeness between committee and villagers makes the situation more open for critical control from below. In village meetings in the area the villagers do at least seem ready to exert such a control, and to participate actively in decision-making.

As the economic activities of the villages are expanding it will, however, become a precondition for the efficient exercise of this control from below that not only the village-leadership but also as many ordinary members of the village as possible are given some training in village management including simple principles of accounting and planning, etc.

For the emerging village democracy the most important thing then is that the ordinary villagers continue to see – or are brought to see – the new village organization as their organization, be it in a conflict between them and the village leadership or in relation to the more general contradiction between the peasants and the bureaucracy within party, government and
The buildings still look the same, but are closer together (mark neighbouring house in the left side) and near to the roads.

Schools are being built in the new villages (Labour and local materials are provided by villagers, the rest by government)
parastatals. It is likely, that in the more "complex-like" situation the most common conflicts will be between villages as a whole and the government personnel and their directives, whereas in the more traditionally organized villages the greater degree of social stratification may well result in a relatively well-to-do leadership with special interests conflicting with those of the mass of ordinary peasants.

More than anything else, the functions of the new village management technicians, that are currently being trained and spread all over the country as government officers with responsibility for the general development of five villages each, become decisive in these contexts. They must be able to, and allowed to, support the development of the villages as relatively independent organizations of the ordinary peasants which implies that they mainly act as advisers, interfering directly only to support the critical control function of the ordinary villagers vis-à-vis the village leadership. The imposition of government regulations, which must be of a broad and flexible nature, shall normally be the responsibility of the higher ward, divisional and district authorities.

With such a framework it is clear that the future village managers, which according to the plans will be placed in each village, should not be part of the government hierarchy at all, but on the contrary be placed fully under the control of the village committees and the village meetings, which should decide (within certain legal guidelines) on their terms of employment, salaries and allowances, and functions in the village.

Finally the political development of the villages, including introduction of new collective forms of production, must emanate from the villagers themselves and their democratic decisions in accordance with an understanding of the common interests of the majority in undertaking such endeavours, and of course based on already gained experiences, on advice from the technical experts, and on political education and practice introduced by the party and its cadres in the villages.

It is easy to visualize how, in the absence of such strong safeguards for and commitment to the democratic self-organization of the peasants in the new villages, the whole new set-up will almost inevitably be turned into one big machinery reaching right from the top down to the village manager and his village committee at the bottom – for the effective regimentation and suppression of the peasants by the government and the party. At least that is certainly how it will be felt (and the tendency is already there) by the peasants, who are then forced to concentrate their energy and resources on trying to avoid the pressure, instead of being able to mobilize them for the development of their communities and their productive forces.
Notes


3. The following account is based primarily on information from the former chairman of the ujamaa village, who is still living in Jionee Mwenyewe. It has been checked only against scanty information in some cooperative society files and from non-ujamaa members living in the area at the time. It may therefore not give the full picture, but on the other hand the present author does not have the impression that it is too biased.

   For a more thorough analysis of the ujamaa policy and its implementation, see e.g. *Ujamaa – Socialism from above*. J. Boesen, B. Storgaard Madsen, and T. Moody. Uppsala 1977.

4. As recollected by the former chairman, checked and found reasonably uniform with UWA membership register for 1970171 (the only year for which it includes data on the ujamaa village).


7. Compare tables 3 and 4, p. 35.

8. From tables 5, p. 37 and 6, p. 43 and from Ghawoga, op.cit.

9. See Chapter VIII.

10. Already in 1972 the project was reviewed and it targets revised downwards; *National Agricultural Development Program*, op.cit. In 1976 production was lagging three years behind schedule; *Tanzania. Appraisal of the Tabora Rural Development Project*. The World Bank 1976. Annex 1, p. 6.


14. Tables 3 and 4 on p. 35 and table 11, p. 67.

15. Tables 3 and 4, p. 35.

16. See for example Boesen et al., op.cit.

17. One village for example has employed a former clerk in the cooperative on the condition that he became a member of the village with his own farm there and got only part time work for the village (and a corresponding small salary).
PART II

The Political Economy of Peasant Tobacco Production in Tanzania
CHAPTER V

Tobacco Production Based on – and Constrained by – Exploitation of Natural Resources

Tobacco is widely believed to be a crop of many virtues:
- It exploits natural resources otherwise of little use to the country, i.e. the unfertile soil and enormous quantities of wood in the vast "Miombo" forests of Central Tanzania.
- It responds well to productivity increasing measures, such as careful implementation of recommended agricultural practices and proper use of technical inputs, and therefore to close supervision and centralized direction of the peasant producers by qualified experts.
- It ensures a better utilization of the available resources on the peasant farms, notably the family labour, through high labour demands more evenly distributed throughout the season than for most other crops.
- It is highly profitable under small producers' conditions.
- By drawing masses of "traditional subsistence peasants" into the market economy and into the production of a technically demanding crop it breaks the way for further "modernization", in terms of infrastructural developments and of innovationess among the people in relation to their production and consumption patterns, in fact their whole way of life and standard of living.
- Within and connected to the tobacco industry, employment is created in input producing industries, extension and research, administration, processing, and marketing; it yields high foreign exchange earnings; and generates an extractable surplus for use in other sectors.

When analysed more in depth several of these propositions turn out, however, to be truths with qualifications, as we shall see in this and the following chapters.

Climate and Land

Tobacco thrives well under the climatic regime and on the soils characteristic of the vast "Miombo" woodlands of Central Tanzania.

It does not demand very high annual rainfall, as long as the rain is fairly
well distributed over one long rainy season of 5–7 months' duration, which is the case in the main tobacco growing districts. The mean annual rainfall in these districts is shown in table 13.

<table>
<thead>
<tr>
<th>Name of district</th>
<th>Mean annual rainfall, mm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tabora</td>
<td>882</td>
</tr>
<tr>
<td>Urambo</td>
<td>947</td>
</tr>
<tr>
<td>Chunya</td>
<td>725</td>
</tr>
<tr>
<td>Iringa</td>
<td>633</td>
</tr>
<tr>
<td>Songea (fire cured tobacco)</td>
<td>1126</td>
</tr>
</tbody>
</table>

On the contrary, too heavy rainfall can be detrimental to the tobacco crop. Tobacco growers in the areas covered by the now defunct Tabora Tobacco Growers Cooperative Society Ltd. lost a considerable part of their tobacco crop in 1969/70 because of heavy rains. Hail storms also destroy the tobacco crop as they did in Chunya in 1972/73 and caused a loss of around shs. 2 mill. worth of the crop.

The light loam and greyish brown sandy soils of the "Miombo" forests are also favourable for tobacco as their low content of natural nutrients permits the careful manipulation of nutrient levels through fertilizer application, which is important for the quality of the tobacco produced. The low soil fertility and its weak structure, which deteriorates further under fertilizer application and when the forest is cleared, demands a rotation system with short cultivation and very long fallow periods, which also goes well with the need to shift tobacco growing in order to avoid nematodes.

The often very dense forest means that the necessary frequent clearing of new land for expansion of the crop rotation system is less deterrent, when productive use can also be made of the wood, as is the case with its use as fuel wood in the tobacco curing process.

Ecological conditions therefore are in general more favourable for tobacco than for any alternative cash crop, to which must be added that tobacco fits well into a rotation system with maize, the main food crop in the area.

Apart from its potential for tobacco production the "Miombo" forest has not been very attractive for human settlement, partly for exactly the same reasons that give it its tobacco potential, partly because of its abundancy of wild animals and tsetse flies and its frequent lack of natural water sources.
While the area covered by the "Miombo" type of vegetation is estimated to be about 460,000 km² or half the area of the whole of Tanzania, most parts of it are very sparsely populated. Of the main tobacco growing districts for example, Chunya in 1965 had a population density of only 2 inh./km², Tabora and Urambo of 3 inh./km² (taken together), and Iringa of 8 inh./km². Map 1 showed the location of some of the major "Miombo" areas in Tanzania.

It is clear that land in itself is not a problem under such conditions, even with the most extensive rotation system. Limitations to human settlement are only imposed by the natural hazards mentioned above, the costs of creating even a minimum of physical and social infrastructure demanded today, and any legal restrictions which society may impose. Such legal restrictions have been laid down in the past, e.g. in the form of anti-tsetse drives to move people away from the most tsetse infested areas or establishment of national parks and game reserves, but never so comprehensively as since villagization in 1974.

Since then all rural dwellers are bound to live in officially approved villages only, and to follow the cultivation systems designed for these villages. The villages are now supposed to be permanent settlements, in the long run with fairly elaborate construction of infrastructural facilities. As each comprises 200–400 families they are very large in relation to the ecological conditions prevailing the "Miombo" zone. A land problem must therefore be expected soon to emerge in the vicinity of the villages, demanding preventive measures against soil erosion and conflicts over land rights and rotation systems.

These problems cannot be solved, as is tried at present, by devising comprehensive block-farming systems and increasing rates of fertilizer application. Such "solutions" will only in the long run lead to further soil erosion and more conflicts, involving also the authority trying to impose the block-farming regulations in endless, futile disputes.

The only feasible long-term solution, if the new village concept has at all to be maintained, would be to break up the villages into a village centre surrounded by several "satellites". In the schematic presentation of this alternative on Map 10 there is a centre and 4 satellites, each consisting of 50 families. The centre and satellites each has enough land nearby to allow every household to grow e.g. 1 ha. of tobacco and 2 ha. of maize on a 1 year tobacco 2 years maize 7 years fallow rotation basis. Nobody has a walking distance of more than 1.5 km, to the fields and of 2.5 km. to the centre, with its social and infrastructural facilities, compared with at least twice as long distances to the fields in a concentrated village of similar size.

Such an alternative village structure has the further advantage that it is
Map 10. Schematic presentation of possible alternative layout of tobacco village—with village centre and satellites.

more similar to the settlement pattern to which the people are used, than the present large, concentrated settlements.

(Experience shows that a note of caution is necessary here: Of course no schematic, theoretical paper layout should be allowed to direct the actual establishment of villages. It can be nothing but a broad guideline for the
peasants, who must otherwise be allowed to decide on the set-up of their village in accordance with their knowledge of the agricultural system and the ecological conditions in the area!)

Now that villagization has already moved people into large concentrated settlements, the best way to go about approaching the land problem would in most cases be through a gradual process, where groups of people, as they have done in the past, voluntarily agree to move out and begin to establish satellites, as the land around their present settlement become overcultivated. According to what is most feasible under the prevailing ecological, agricultural, and social conditions each satellite may consist of one concentrated settlement, several smaller clusters of households, road-side settlement, scattered settlement, etc. (as also shown in the schematic presentation, Map 10).

In some villages such a process is already, informally, taking place, as people maintain a house in the village, where they live during the off-season, and another at their fields 1–2 km. away, to live in during the time of fieldwork.

In the "Miombo" zone therefore land is not, and does not have to become, a constraint on settlement and production.

**Tobacco Production and the Forest**

A much more serious problem, however, is posed by the growing devastation of the forest itself, from which not only the land, but also fuel wood is drawn.

Firewood from the forests surrounding the tobacco producing areas is the only source of fuel used by tobacco growers for tobacco curing and by all the people in the areas for domestic cooking purposes. The continued use of firewood is pushing its source further and further away from the tobacco households. The 1974/75 villagization programme by assembling together a large number of villagers, has increased even further the distance between the tobacco households and the forests – the source of fuel firewood.

Too little is known about the productive capacity of the "Miombo" forest in different areas, about the time needed for natural re-afforestation or the possible yields of selective harvesting over a long period, about the actual wood consumption in tobacco curing and the possibilities of reducing it through different barn designs, about the actual rates of deforestation to obtain the necessary firewood, about the ecological effects of deforestation, and about the possibility and economics of using alternative sources of energy, e.g. planted timber, coal, oil or sun-heating.

It is a part of the recently established Tabora Rural Development Project...
The natural forest provides free firewood – and is not replaced

(TRDP)⁶ to urgently initiate such research, as well as to start a pilot-reafforestation programme based on eucalyptus species. The following is therefore based on estimations, that are not scientifically verified, but do allow the drawing of a broad picture of the problem.

During our survey in Tabora there was common agreement among tobacco growers that about 15 m.³ of firewood is needed to cure the tobacco harvested from one acre (0.4 ha.), and that this quantity is obtainable from one acre of forest. At an average yield of 300 kg./acre (750 kg./ha.) this would mean that 50 m.³ of firewood are used per ton of cured tobacco, and is obtained from 1.33 ha. of forest.

The TRDP is based on the following estimates:

45–120 m.³ wood is needed per ton of cured tobacco – or a mean value of some 80 m.³. The firewood yield from one ha. of forest is in the region of 40 m.³, so to cure one ton demands the wood from 2 ha. of forest. Tobacco yields are estimated to average 675 kg./ha. of cured leaves, so one ha. of tobacco would demand 1.35 ha. of forest for fuel wood.

Over the last 20 years, 1956/57–75/76, a total of 120,000 tons of flue-cured tobacco have been produced in Tanzania, which means that on the premises given above some 160 – 240,000 ha. of forest have been cut down for curing purposes alone. To this should be added an unknown, but smaller, amount for curing of fire-cured tobacco. Suppose the total comes to 2–2,500 km.². It is then about 0.5 % of the area of the total "Miombo" zone.⁶
This rate does not immediately seem very alarming. But in the latest years total flue-cured production has reached 15,000 tons/year and by the end of the present plan period, in 1980, it is targeted to be as high as 25,000 tons, using 35–50,000 ha. of forest per year for curing. Furthermore the "Miombo" zone is far from consisting totally of productive forest in areas feasible for tobacco growing.

If we take Tabora Region alone, for which the best estimates exist, table 14 gives a picture of the situation.

Table 14. Forest areas in Tabora and Urambo Districts

<table>
<thead>
<tr>
<th>Description</th>
<th>Hectares</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area of the two districts</td>
<td>6,170,000</td>
<td>100</td>
</tr>
<tr>
<td>Woods and forests (excl. high altitude forest)</td>
<td>4,670,000</td>
<td>76</td>
</tr>
<tr>
<td>Total area of tobacco zone</td>
<td>2,430,000</td>
<td>39</td>
</tr>
<tr>
<td>Productive forest within tobacco zone</td>
<td>1,290,000</td>
<td>21</td>
</tr>
</tbody>
</table>

Taking the Tabora situation as representative for the whole "Miombo" zone would mean that of its total area of 460,000 km² only about 100,000 are productive forest within areas feasible for tobacco growing. A future production of 25,000 tons/year at present methods would therefore exploit this resource at a rate of 0.5 % per year. Natural regrowth of the "Miombo" type forest is estimated to take some 75 years, in which case there is no risk of depleting the forest reserves at a 0.5 % exploitation rate.

It is easy to see, however, that the safety margin is not all that big. All over calculations are based on estimates, and if regrowth of the natural forest takes 100 years instead of 75 and the exploitation rate is 1 % per year, including not only fuel wood for flue-curing, but also for fire-curing, domestic use, wood industries, and clearing for agricultural and other purposes, we already reach a critical situation. It is unknown, furthermore, what degree of forest exploitation can be allowed without causing major, perhaps catastrophic, ecologic changes, in climate, soil, and water conditions.

On top of this, tobacco production is not evenly distributed, as implicitly presupposed in the calculations above. On the contrary there is a high concentration in Tabora Region, where the resource situation is therefore much more grave.

According to the TRDP the total area of productive forest in the tobacco zone in Tabora is 1,290,000 ha. (table 14). From 1956 to 1977 this area produced 77,500 tons of flue-cured tobacco for which some 100–150,000 ha. of forest must have been cut down for fuel wood, i.e. around 10 % of the
productive forest. At present production is 8–10,000 tons per year with a 1980 target of 16,000 tons/year, giving a present exploitation of forest resources between 10 and 20,000 ha./year, expected to rise to 20–30,000 ha./year or 1.6–2.3% of the total reserves each year. Under such conditions it would, therefore, take only 50 years, or even less, to destroy the enormous forests of Urambo and Tabora districts, and with the ecological consequences this would undoubtfully have, probably leaving the two districts more or less as useless barren semi-deserts.

This emerging depletion of the natural resources and the possible resulting ecological disasters in large parts of the country would seem to be a much graver problem than the one the forest component of the TRDP is concerned with, i.e. the increasing costs of transporting fuel wood for tobacco curing.

Briefly the TRDP reafforestation component is based on calculations indicating that a new post-villagization concentrated village growing slightly less than 250 ha. of tobacco per year will have depleted its forest resources, within a 5 km. radius in a time-span of 10 years. Transport costs for forest wood then become large enough to make a timberplanting program profitable. At a planting rate of 40 ha. per year (making the village self-sufficient in timber after 25 years), a cost of 350 shs./ha. in the planting year (excluding the peasants' own labour), a discount rate of 10–15%, and even at alternative transport costs well below the present actual costs, the internal economic rate of return is estimated at 40–45%.

To achieve such an IER it seems however that the cost factor in relation to planted hectarage has been kept very low, as for example the National Agricultural Development Program report quotes costs of a major tobacco afforestation scheme in the region of 870 shs./ha. planted forest. The TRDP cost factor furthermore includes the peasants' own labour at a nominal rate of 1 sh. per day only, arguing that as the work can be placed outside the agricultural labour peaks it has negligible opportunity costs. This argument is of dubious value in the very labour intensive peasant agriculture found in the tobacco areas, where a period of recreation and non-agricultural work has a definite value of its own.

Another question which has apparently not been taken into account by the TRDP is the wood quality needed with the present curing methods. Its calculations are based on a direct replacement of one m.³ of "Miombo" wood by one m.³ of eucalyptus. We are not energy or forestry experts, but a simple observation of the speed with which eucalyptus burns compared with the wood from the natural forest, makes such an assumption suspicious, when no actual trials have, as far as we know, been made.

Finally the whole transport cost problem could in many villages be easily
put off for another 40–50 years if the break up of the village into centre and satellites, as discussed above as a feasible solution also to the land question, was allowed. For example in the case shown schematically on map 10 above all households would have enough reserves of forest within a maximum distance of 5 km. for 40–50 years of continuous tobacco production at the rate of 250 ha./year for the village as a whole.

Even if this is then the most favourable medium-term solution it would of course still leave unsolved the more important problem of general long-term over-exploitation of the natural forest.

Without much more research it cannot be taken for granted, however, that reafforestation with eucalyptus timber is the optimum or most feasible solution. There are as already mentioned other possible alternatives, that have not been sufficiently surveyed, e.g. planted, but slower growing timber, that is more similar to the natural forest, other energy sources such as coal, oil or solar energy, or a change in barn construction to save energy. Among these the latter is perhaps the most immediately feasible solution.

Undoubtedly any of these alternatives can have only long-term effects and will demand a fair amount of investments and labour efforts both on the part of the national institutions involved and the peasant producers. It is extremely important therefore that no major campaign, based on any one of the possibilities, is undertaken – in a panic – before the whole situation is sufficiently clarified, through research into the precise present position with regard to exploitable natural timber resources and the actual rate of exploitation, through experiments with alternative sources of energy and curing processes, and through calculations of their profitability for the peasant growers and under peasant conditions.

As with so many other export products from underdeveloped countries the real problem of course is that tobacco is produced for a world market with a price structure that presupposes the more or less free exploitation of natural resources in these countries. Thus underdeveloped countries are often forced by competition and their need to export to produce at prices that do not make allowance for the full costs of reproduction of all the means of production.

The whole question therefore in the final analysis involves more than just some tobacco curing technicalities. It must also in this respect be seen in relation to Tanzania’s overall development strategies, concerning the nation’s role in the world market, its export dependency, and the resulting exploitation of human and natural resources through petty peasant production of primary export commodities.

To be more concrete, the rate of forest-devastation implied in the pursuance of the present and planned foreign exchange earnings from
tobacco export, may well be so great (and to a large degree unavoidable in view of the costs of possible alternatives and the price constraint in the world market, presupposing availability of free fuel wood) that it becomes a strategic question whether Tanzania should at all concentrate so single-mindedly on expansion of tobacco production in the "Miombo" areas as is presently the case.

The answer is crucial for the execution of the planning tasks of regional administrations as well as institutions such as TRDB and TAT, but being of a national strategic nature, it cannot be given by these institutions with their partial interests, nor can it be discussed further in the present context, limited as it is to the tobacco industry and related developments.

Water

Water is a prerequisite for any human settlement. It has already been mentioned, how the shortage of permanent sources of water has limited settlement in many parts of the "Miombo" zone.

The limiting factor is the walking distance over which at least a minimum quantity of water needed for everyday household use can be carried between the house and a source from which water can be fetched, also throughout the long dry season during which the depressions, that are waterlogged when it rains, dry out.

Tobacco production, however, imposes an even more restrictive limitation. In order to obtain acceptable results, the tobacco growers have to be able to transplant their mature seedlings from seedbeds to tobacco fields at, or at least shortly after, the onset of the rains. Most of the two months between sowing and transplanting therefore falls in the last part of the dry season, and it is consequently necessary for the growers to water the seedbeds artificially preferably three times every day. This is normally done with a watering-can, and the large amounts of water needed cannot be carried very far, but must be drawn from a source nearby.

So the seedbeds are located close to permanent natural water sources (which are extremely scarce) or in areas, where the groundwater table is not too low or accessible barred by hard or rocky soil, thus allowing the growers to dig shallow wells providing water throughout the year. To ensure proper maintenance and watering, the seedbeds again cannot be very far from people's houses.

In limiting the areas suitable for the location of tobacco producing villages this constraint contributes to the fuel wood problem, as mentioned above. It might be alleviated to some extent through construction of permanent reservoirs of rainwater or boreholes, perhaps in connection with pumping
facilities to make the water available also outside the immediate neighbourhood of the source, but in any case the solution is costly and would deduct further from the already dwindling net incomes of the tobacco producers.

Notes

1. Sources: E.A. Meteorological Department and Regional Agricultural Offices.


4. See p. 75 above.

5. A regional integrated rural development project, prepared during 1976 by a mission from, and largely to be financed by the World Bank. The information used here was contained in the mission report and reported to us during our field work in the region.

6. See page 89 above.

    b. Mission report on TRDP.

CHAPTER VI

Technical Inputs, Investments and Capital Accumulation

In the preceding chapter we discussed how peasant tobacco production is based on an intense and indiscriminate exploitation of natural resources, which have so far been freely available for the producers. Up till now therefore, control or ownership of such resources has not posed any economic or legal restrictions on the peasants’ immediate production processes. We also saw that after villagization the legal situation is more ambiguous, which together with the dwindling physical resource base may lead to a much higher degree of outside control and regulation of the peasants’ use of their environment. One implication may well be some form of commoditization of land and forest with a price that covers their "reproduction" and perhaps even rent and interest.

But flue-cured tobacco production has already involved the peasants deeply in commodity circuits relating the individual producers directly to the extra-peasantry economy, and extending their dependency on it beyond both marketing of crops and provision of certain consumption goods, to inputs vital for the very initiation and maintenance of the production process. This has been possible because flue-cured tobacco is an extremely 'input intensive' crop, which demands many other inputs than land and fuel wood; mostly technical inputs that is, that cannot simply be acquired locally with the peasants' own labour.

Table 15 gives an indication of the types, quantities and costs of inputs involved, apart from the normal farm tools, i.e. hoes, machetes, axes etc.

This is a theoretical budget. First of all only the first 3 items are directly related to the cultivated area. Items 4–6 depend entirely on the size of the harvest (here estimated at 750 kg./ha.), while 7 and 8 are fixed quantities independent of both area and harvest (with uncertain limits of course). 9 and 10 relate to the number of barns, which is again connected, but not directly correlated with the size of the expected harvest, since it has strong discontinuities as at least one barn is needed whether it is for 0.1 or 0.8 ha. of tobacco, while it is a fairly big jump to build a second one.

Secondly there is a certain scope for the tobacco growers to manipulate the quantities used of the items in the budget. Items 7–10 can usually be used
Table 15. *Theoretical input budget at 1976177 (subsidized) prices for 1 ha. of flue-cured tobacco*

<table>
<thead>
<tr>
<th>Item</th>
<th>Recommended quantity</th>
<th>Years in use</th>
<th>Cost per year shs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Seeds, fertilizer, insecticides and pesticides for seedbeds</td>
<td>1 'two acre seedbed pack'</td>
<td>1</td>
<td>165.00</td>
</tr>
<tr>
<td>2. NPK fertilizer</td>
<td>15 bags a 50 kg.</td>
<td>1</td>
<td>1050.00</td>
</tr>
<tr>
<td>3. Thiodan dust</td>
<td>12.5 kg.</td>
<td>1</td>
<td>47.00</td>
</tr>
<tr>
<td>4. Hessian cloth</td>
<td>75 m.</td>
<td>1</td>
<td>110.25</td>
</tr>
<tr>
<td>5. Tarlined paper</td>
<td>75 m.</td>
<td>1</td>
<td>56.25</td>
</tr>
<tr>
<td>6. Jute twine</td>
<td>12.5 kg.</td>
<td>1</td>
<td>39.75</td>
</tr>
<tr>
<td>7. Empty drums (for water)</td>
<td>1</td>
<td>3</td>
<td>38.30</td>
</tr>
<tr>
<td>8. Watering cans</td>
<td>2</td>
<td>3</td>
<td>35.10</td>
</tr>
<tr>
<td>9. Barn thermometers</td>
<td>2</td>
<td>2</td>
<td>16.50</td>
</tr>
<tr>
<td>10. Barn flues</td>
<td>10 a 6 ft.</td>
<td>3</td>
<td>255.20</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td></td>
<td></td>
<td>1813.35</td>
</tr>
</tbody>
</table>

*Recommended quantity varies (from area to area) between 12 1/2 and 17 1/2 bags – i.e. 875 – 1225 shs. – per hectare.*

for more than the 2–3 years on which the theoretical budget is based. But especially the most expensive quote in the budget, the recommended fertilizer application rate (item 2) may be, and is, reduced considerably by the individual growers. This is definitely not because of lack of knowledge of the recommended rates. On the contrary, peasants who in some official connection have to state their acreage normally calculate it as the number of bags of fertilizer they have actually used, or expect to use, divided by the official application rate, thus almost always arriving at an underestimation.

The growers have several good reasons for using less fertilizer than the recommended rate. Even if the recommended rate is supposed to be the one that gives the highest per area output, the marginal output of the last bag of fertilizer may not be big enough to warrant both the extra costs of that bag, the extra costs of the output related input items, and the extra output related labour, which, as we shall see in Chapter VII, is the larger part of the total labour use in tobacco production. Similarly, as labour constraints are usually also related to harvesting and processing rather than to establishment of the crop (Chapter VII) it may be rational for the producer to produce the maximum quantity the household can harvest and process on a larger area, but with less fertilizer than the recommended rate, thus substituting labour in the establishment period (when it is not so much of a constraint) for the monetary costs of fertilizer.

The "recommended" rates of fertilizer application are furthermore used much too uniformly by the extension service, without taking local natural
Labour is done by hand, but in Urambo there are still several tractors left from the early sixties - each composed of parts from several others. This one cannot start on its own, but has to be rolled down its small 'parking hill': They are used for ploughing and transporting firewood and fertilizers on a hire basis.

deviations or variations in land use into account. Tobacco on virgin land for example gives the best result at a lower fertilizer application rate than that which is optimal for tobacco grown after secondary bush (bush fallow), for which the recommendations were originally made. Since the risk of spoiling the quality of the harvest by using too much fertilizer (nitrogen) is bigger than the slightly reduced output resulting from using less than the optimal amount, it seems quite reasonable for the growers normally to ensure that they are on the low rather than the high side.

Finally the tobacco growers can reduce their investments in barns, both in purchased inputs and monetary and labour expenditures for the actual construction, by optimizing the use of the available barn capacity. That can be attained either through cooperation between several households in the use of the barns or by extending the peak harvest period over a longer time, involving some loss in quality due to early and late picking of some of the leaves.

The former practice does exist spontaneously within small groups here and there. In some of the more recent schemes the authorities tried to introduce cooperative curing in large communal barns, an effort which did, however, lose its momentum once the growers had just reached a scale of
production barely large enough to warrant the use of individual barns. The reason is said to be the organizational difficulty in collectivizing one stage in an otherwise completely individual production process, and in particular the total dependency of the outcome for all participants on the consistency and care with which each single participant fulfilled the duty to take turns in the tedious work of the curing process. So the latter method mentioned above, the extended harvest period, is the most widespread among average size tobacco growers, and is often an economically rational way for them to avoid the excessive barn capacity which might result from construction of an extra barn.

In chapter III we estimated the average costs of inputs used per hectare in the 1976-1977 season in Tabora and Urambo to be some 700–800 shs. for fertilizers (NPK) and about 500 shs. for all other inputs. This estimate was based on known quantities of inputs distributed to all the growers and the average application rate of NPK fertilizer indicated by our case studies (with measurement of real field sizes), so it seems reasonably safe on that basis to suggest actual average input costs of around 1,200–1,300 shs. per hectare of tobacco or some 1,000 shs. per grower, which also corresponds with the results of our questionnaire survey in Tabora, Urambo and Chunya Districts.

That survey also gave an average value of farm tools per household of app. 160 shs. (in Tabora and Urambo only) while the curing barn(s) had cost 420 shs. on average per household to construct.

These figures show, that while the total fixed capital assets of the tobacco producers can be kept at the fairly low level – of about 600 shs. per household – which is normal in African peasant agriculture, then tobacco demands – on top of this – an unusually high amount of annually recurrent investments in technical inputs, i.e. approx. 1,000 shs. per grower.

The input prices given above have furthermore been heavily subsidized since they began to increase rapidly in the 1973-1974 season, so without the subsidy the absolute costs would have been even higher. In theory the producer price would then also have been correspondingly higher, since the subsidy is financed by the tobacco authority itself from its income from tobacco sales. The average net return per kg. to the producers should therefore be the same with and without the subsidy, but their net return/costs ratio would be much smaller without the subsidy, as demonstrated in table 16.

At the time this study was made the exact figures for the subsequent seasons were not yet available, but with effect from the 1976-1977 season the subsidies have been reduced and the producer prices of fertilizers and seedbed packs (the subsidized items) have increased almost 50% over their
Table 16. Price, cost and subsidy structure for an average kilogram of tobacco produced by TTGCS members (Tabora) 1974/75 and 75/76

<table>
<thead>
<tr>
<th></th>
<th>1974/75</th>
<th>1975/76</th>
<th>2 year average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>shs./kg.</td>
<td>shs./kg.</td>
<td>shs./kg.</td>
</tr>
<tr>
<td>Producer price</td>
<td>6.72</td>
<td>6.65</td>
<td>6.68</td>
</tr>
<tr>
<td>(after deduction of 50 cents society levy)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs (subsidized) of tobacco inputs to producer</td>
<td>1.53</td>
<td>1.18</td>
<td>1.34</td>
</tr>
<tr>
<td>Net return</td>
<td>5.19</td>
<td>5.47</td>
<td>5.34</td>
</tr>
<tr>
<td>Inputs subsidy</td>
<td>0.93</td>
<td>1.36</td>
<td>1.16</td>
</tr>
<tr>
<td>Real (unsubsidized) costs of inputs</td>
<td>2.46</td>
<td>2.54</td>
<td>2.50</td>
</tr>
<tr>
<td>Net return/subsidized costs ratio</td>
<td>3.4</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Net return/unsubsidized costs ratio</td>
<td>2.1</td>
<td>2.2</td>
<td>2.1</td>
</tr>
</tbody>
</table>

1972/73 level, where they had been kept until then. Consequently the net return/subsidized costs ratio is likely to have declined somewhat from its 4:1 level in the table towards the 2:1 net return/unsubsidized costs ratio, though it is still a good way from reaching the latter level.

The commercialization of peasant production in the tobacco areas does, however, go even further than to commoditization of part of the product (the cash crop) and of inputs for the production of that crop. Even the subsistence crop, on which reproduction of the family labour force is primarily dependent, is increasingly being produced with technical inputs acquired in the market (and from external sources).

The principal and dominating foodcrop is of course maize and the technical inputs in question is fertilizer (i.e. Sulphate of Ammonia, S/A). The use of maize fertilizer has been rapidly increasing in recent years, and in Urambo and Tabora it reached almost the same absolute quantity as that of tobacco fertilizer in the 1976/77 season. Only the tobacco growers are provided with maize fertilizers, so if their maize area is – on average – twice as large as their tobacco area as our survey showed, this would indicate an application rate very close to the recommended 5 bags of S/A per hectare for all their maize (since the actual NPK application rate is supposed to be 10–11 bags per hectare of tobacco). This is of course unlikely to be true, and it is also well known that many tobacco growers sell a part of their S/A supply to non-tobacco growers. They thus perform a very useful role in extending
the input supply and credit system also to non-tobacco growers, relieving the
distribution and credit organizations of the burden of setting up a second line
of operation, untied to tobacco, the crop over which they have a marketing
monopoly. (Granted, the TAT does not quite see it this way, and their
extension officers are continuously trying to deter the tobacco growers from
selling their maize fertilizer, in order to turn all peasants in these areas into
tobacco growers. One of their arguments, that the tobacco growers exploit
the non-growers by overcharging them for the fertilizer, is of course also true
to some extent).

The major part of the maize fertilizer is, however, used by the tobacco
growers themselves. As such its costs are covered from their tobacco
incomes, since the maize is for their own consumption and only an occasional surplus is sold. As maize production furthermore today is an
integrated part of the tobacco enterprise, catering for the reproduction of
the tobacco labour, the costs of the maize fertilizer cannot be separated from
the rest of the tobacco economy. In table 17 the maize production costs (and subsidy) are included in the price and cost structure from table 16.

Also the maize fertilizer subsidy has been reduced (from 75 % to 50 % of
the real price) in the seasons following the 1975/76 season which means not
only a reduction in the income/costs ratio, but also a relative decline in absolute net income, since a reduction in this subsidy is not correlated with

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Table 17. Income and inputs costs per average kg of tobacco produced by TTGCS Members 1974/75 and 1975/76$^a$

<table>
<thead>
<tr>
<th></th>
<th>1974/75</th>
<th>1975/76</th>
<th>2 years aver.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>shs./kg. tobacco</td>
<td>shs./kg. tobacco</td>
<td>shs./kg. tobacco</td>
</tr>
<tr>
<td>Net return on tobacco alone</td>
<td>5.19</td>
<td>5.47</td>
<td>5.34</td>
</tr>
<tr>
<td>Costs of maize inputs (subsidized) to producer</td>
<td>0.24</td>
<td>0.35</td>
<td>0.30</td>
</tr>
<tr>
<td>Net return less maize input costs = net income</td>
<td>4.95</td>
<td>5.12</td>
<td>5.04</td>
</tr>
<tr>
<td>Maize inputs subsidy</td>
<td>0.45</td>
<td>1.08</td>
<td>0.78</td>
</tr>
<tr>
<td>Net return less real (unsubsidized) maize input costs = real net income$^a$</td>
<td>4.50</td>
<td>4.04</td>
<td>4.26</td>
</tr>
<tr>
<td>Net incomel/subsidized costs ratio</td>
<td>2.8</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Real net income/subsidized costs ratio</td>
<td>1.4</td>
<td>1.0</td>
<td>1.2</td>
</tr>
</tbody>
</table>

$^a$ The maize fertilizer subsidy is part of the National Maize Project, so it is paid by the state and not deducted from the tobacco producer price like the tobacco inputs subsidy.
an increase in producer price, as is the case with the tobacco inputs subsidy.

All this has been said to demonstrate the extraordinary degree of input intensity of tobacco production, the deep involvement of the growers in external commodity circuits, and the importance of the monetary costs of production in their income structure.

At the same time, however, flue-cured tobacco is still also very labour intensive compared to other crops. The technical innovations involved in its adoption have not included any major changes in the labour processes, which might favour labour saving mechanization or other large fixed investments.

These have been essential elements in determining the direction in which flue-cured tobacco production has developed. They have greatly favoured the accommodation within a small-scale peasant labour economy of that jump forward in the development of the productive forces, which the production of flue-cured tobacco has implied, with its complicated labour processes and intensive, but variable use of a range of technical inputs, spilling over even to the main food crop, maize.

Thus a high intensity in the use of chemical and similar inputs does not have direct scale implications, as such inputs are highly divisible, which most mechanical equipment for example is not. Large-scale, long-term investments with a slow turnover would almost inevitably involve a certain capital accumulation within the production unit, while inputs with an annual turnover and recovery (!) are more feasible for exclusive credit financing. Within certain limits labour and chemical and similar inputs tend to complement each other in tobacco production and can be manipulated in accordance with considerations concerning the optimal use of all the available labour. Mechanization on the other hand would primarily substitute labour and transfer the emphasis to maximization of productivity of the labour actually used. Finally with almost half the gross income tied to reproduction of the capital used, interest and profitability considerations would feature much more dominantly in the economy if the capital used was only a small fraction of a total slow moving capital outlay, instead of being, as the case is, almost the total capital outlay in the production process.

The technical and economic demands of production itself posed no serious obstacles, therefore, to a shift towards preservation and expansion of small scale peasant production in the tobacco areas. So, while the early trend towards capital accumulation in mechanization and other fixed investments, and the resulting expansion of scale in primary production, did not survive the price-decline and abolition of preferential treatment from the mid-sixties and onwards, the number of small peasant producers, relying mainly on family labour, continued to increase.
This has at the same time facilitated strong external dominance over the peasant producers – by forces which on their side helped to preserve peasant production.

As is the case with any peasant produced export crop a marketing system had to be set up, but probably more elaborate in the case of tobacco than for many other crops, because collection of the crop includes complicated baling and grading at local buying posts several times during each season, keeping accounts of individual growers’ sales over the season, bulky lorry transport, storage, rail transport, and further processing and grading at the central factory in Morogoro. The provision, transport, storing, and distribution of large quantities of very different inputs to a great number of small producers also demand a well developed distribution system.

Both marketing and provision of inputs therefore presupposes the existence of fairly elaborate organizations and physical infrastructures, and correspondingly large investments.

But furthermore, production of a vulnerable crop like tobacco in a highly commercialized, input-intensive system would be incompatible with a peasant economy without a well integrated credit system. First of all, rapid extension of tobacco production with its intense use of inputs to which peasants are normally not accustomed has been possible because all inputs were supplied on credit which was only recovered from the subsequent tobacco crop. Secondly the willingness of the credit system to carry over debts from one season to the next enables the growers to get inputs and continue production also after the rather frequent cases of complete or near complete loss of a season's crop. Finally even the well established growers are often in such need of money at the time they get their tobacco payments that they would find it exceedingly difficult to retain up to half the total payment in order to be able later on to pay for inputs just to maintain their production in the next season, not to speak of the impossibility of an expanded tobacco area.

This situation was clearly illustrated when sample growers in Tabora and Urambo were asked to what degree they thought they would be able to finance their tobacco and maize inputs, and 55% responded that they could not pay cash for any of them, 45% thought they could buy some, while only 3% stated an ability to self-finance all their input requirements.

These conditions have clearly favoured a heavy monopolization of the peasant tobacco producers’ external relations (provision of inputs, marketing, and credit) in order to achieve the necessary coordination, to ensure the proper use of the credit by providing it in kind, and to make certain that investments and interest, both in infrastructure and annual
inputs credit, are recovered immediately through deductions from the sales of the crop.

The more effective this monopolization of control over the peasantry's external ties is, the freer the monopoly holders are to manipulate them, e.g. through price, cost, credit, and interest structures. Ultimately the only potential constraints are political (i.e. posed by the political authorities of the country) rather than economic, market related ones.

In Chapter IX we shall discuss how the institutional framework for tobacco production has changed several times throughout its history in Tanzania, resulting in changing conditions of production, but always subject to a high, though varying, degree of monopoly control.

In the face of such an effective external control over their conditions of production the direct producers can only try to adjust their production processes to those conditions to their own best possible advantage. But even that they have often not been allowed to do independently, as the external institutions in question have in various ways gone beyond that determination of production, that can be achieved by establishing a given set of conditions of production, to try to interfere directly with the production processes.

Chapter VIII deals with these different forms of direct interventions in the production processes, but first it is necessary to look into the ways a peasant, petty commodity producing, labour economy adjusts to the conditions set by flue-cured tobacco production as such or by external socio-economic forces.

Notes

1. Especially in the earliest schemes the admission and therefore the very permission to grow tobacco was heavily restricted and regulated, but this was not directly tied to the resource base but rather to monopoly control over provision of inputs and marketing as discussed in this and the following chapters.
2. Information from TAT.
3. Calculations based on information from TTGCS and final loan statements in TRDB files. Consequently the figures cover the inputs distributed to and not returned by the growers. It is known, however, that the growers themselves carried over somewhat larger stocks than usually between the two seasons quoted here, so some of the costs given for the 1974-1975 season were actually not used until the following season. The 2 year average therefore gives the best indication of the actual situation.
4. As note 3 above.
CHAPTER VII

The Peasant Labour Economy

Apart from land, wood, technical inputs, and equipment the last (but not least) important factor in tobacco production is of course labour. Today the peasant households' own labour is by far the dominant source of labour in all areas of small-scale tobacco production. Even in Tabora and Urambo, where hired labour is probably most common, our survey showed that the majority of the households depended exclusively on household labour, while most of those who did employ labourers did it in a very restrictive way, on piece-work or similar terms.¹

In Chapter V we discussed the free availability of land and fuelwood (so far at least subject only to non-economic legal restrictions), which means that these factors of production for the growers are convertible to the labour needed to prepare them for production, i.e., felling, cutting, transporting the trees, clearing the land, etc. The technical inputs are all—and only—available on credit terms, so their costs, and the interest, appear simply as a deduction from the grower's final gross income, while the annual outlay for other investments (that cannot also be converted into household labour, as e.g., barn-construction can) is so small as to be almost insignificant.

The essential factor in the tobacco growers production calculations must therefore be labour use and the return to labour as a residual category, when all other costs are deducted from the gross income. Since the peasant household is both the production and consumption unit, and the (household) labourers are not separated from their labour-power, the main concern of each production unit is not necessarily, however, to maximize labour productivity in terms of marginal return to labour expended, but rather to achieve an optimal use of all the available labour over the whole year in terms of the absolute consumption possibilities, which this allows the household as a consumption unit.²

In planning of the labour processes in peasant production, labour, therefore, is not in general just another quantifiable cost factor. The availability within the household of labourers with different strengths and skills at different times of the year, the demands and drudgery of different types of work (which are extremely varied in tobacco production) and—to make it even more complicated—the variable (and subjective) utility of rest and leisure, has to be taken into account. Consequently the products do not
have a definite cost of production, not even in terms of labour expended in their production.

Furthermore, although the tobacco growers are commodity producers, the unity of production and consumption within the peasant household means, as already mentioned, that the ultimate motive force of production is the consumption possibilities it allows the household, and especially in securing the consumption needed for its simple reproduction. The conversion of the products into consumption possibilities, or use values, does, however, take place in different spheres, i.e., the wider "world" market, the local market, and within the individual household. So in trying to optimize their output the producers have to take into account that the same product may have varying use value equivalents, depending on which sphere they are realized in. Similarly different products with the same exchange value in the "world" market may have different use value equivalents, if they are realized in the other spheres.

"World" market prices, or relative exchange values, are fixed by market forces, which we shall not discuss here, but which are by and large independent from local labour and utility considerations and from the subsequent production decisions of any single peasant community. They are often highly variable over time, but irrespective of changing local conditions.

Thus peasant "farm management" calculations must to a large degree be "reactive" to "world" market prices both for their own products and for the goods they buy, as the peasants are not only unable to influence, but often even to predict price changes in this wider market, which makes it hard in anything but a very vague and general way to compare these future exchange values with alternative local exchange and direct use values.

We noted above, that in the mixed peasant production it is difficult to accord any definite labour value to the individual product. Still, apart from temporary changes in supply and demand, local market prices must have a long-term tendency towards a certain correspondence with the necessary labour used in production of the goods, weighed according to type and time and possible alternative uses of that labour. No producer would in the long run produce and trade one product against another, which could itself be produced with relatively less of the same labour. This surely is only a tendency, subject as it is to modifications, originating not only from the subjectivity of labour value already mentioned, but also from local social norms, from the fact that many goods are only traded as occasional surpluses over the household's own consumption, and from price variations in the "world" market.

Finally, unlike most other immediate producers, the peasants have the option to produce use values directly for their own consumption. In
comparable value terms it has the advantage that they avoid the often excessive marketing margins between producer and consumer prices, as well as the effects of short-term price fluctuations in the market. But even more important perhaps is the security it gives the households to produce some of the goods necessary for their own reproduction, which in a sense gives a certain subsistence production a much higher use value for the individual household than is justifiable in comparison simply with its exchange or labour value.

The preceding remarks, which are both rather speculative and very much simplified, have been made in order to present an analytical framework within which it seems possible to discuss the labour economy of the peasant tobacco producers, while avoiding some of the mistakes of both excessive quantitative farm management accountancy and of senseless description, spiced with commonsense recommendations or conclusions founded on one dimensional considerations.

In short – to simplify even further – it was suggested, in such a framework, that the basic factors in the tobacco growers' "farm management" calculations are: How to obtain the optimal combination of use values through production of exchange values for the "world" and local markets (net of costs of inputs acquired in the market) and of use values for direct (subsistence) consumption, which cannot simply be quantified in terms of exchange value equivalents; and through the optimal use of the available labour force, which cannot simply be quantified in terms of average or marginal returns to labour time actually expended.

Having stated that these factors are not strictly quantifiable we shall proceed immediately to some quantitative considerations concerning the tobacco producers' labour economy! This is not quite so paradoxical as it may sound, as long as it is borne in mind that it is an analytical exercise in applying generalized and simplified relative weights to some aspects only of this labour economy; and that the purpose is merely to illustrate the likely effects of certain technical and socio-economic conditions on household tobacco production. Thus we neither claim to give a statistical account of actual tobacco producer behaviour, nor to present a complete, "rational" farm management model, but only to attempt to analyse, within the framework outlined above, some of the factors that the households have to weigh against each other in their production planning.

It may be worthwhile, however, in this context, first to warn against the common preoccupation in official reports, plans etc. and by the extension service with yield figures as simple general indicators of productivity and development in peasant production. Firstly yield figures are always based on extremely unreliable estimates of the cultivated areas, but secondly, and
most important, even if they were reliable they would not in themselves be, nor would they express indirectly, quantities of any general central importance to peasant producers. This is especially so, of course, in areas of land abundancy, but even in cases of land scarcity – whether physical or imposed by the existing property relations – the overriding concerns on the part of the peasantry must be centered around optimization of the use of the available labour, which may or may not correlate directly with maximization of yields.

Within the tobacco industry in Tanzania there is very much concern over the wide variations in official yield estimates from year to year, from place to place, and even from farm to farm, as well as over their generally low levels compared with e.g. large farms in Tanzania itself or in Zimbabwe, and over their apparent stagnation in the last 10 years. For example official yield estimates for Chunya District varied from 442 kg. to 604 kg. to 401 kg. to 671 kg. per hectare over the four seasons between 1973 and 1976, and the averages for two neighbouring villages in Urambo District in 1975/76 were stated to be 400 and 800 kg. compared with an overall scheme average of 770 kg./ha. in 1964/65. Estate tobacco yielded nearly 1,400 kg./ha. on average in Iringa in 1973/74 and the same level was reported in South Rhodesia already in the early sixties.

Consequently much effort is spent, especially by the extension service, on making the growers follow recommended and supposedly yield increasing husbandry practices, such as early planting, proper fertilizer application ratios, pure stand growing, weeding, reridging, use of insecticides and pesticides, topping (i.e. cutting off the flower stands) and harvesting at frequent intervals.

It is highly questionable, however, if the variations in yield figures really express differences in husbandry skills and carefulness that could – and should – be reduced through extension efforts. Or to what degree they result rather from deliberate production decisions concerning the methods used, depending on differences in the conditions of production. One thing is that a closer study of available official statistics reveal such an unexplainable inconsistency in the hectarage estimates on which calculations of yield averages are based, that one wonders to what degree the paper fluctuations also exist in reality. But apart from that it is also clear that for example the intensity of production that is most profitable in large-scale, capitalistic production on permanent fields, would not necessarily give higher returns to labour than more extensive methods in small-scale, semi-shifting peasant cultivation. Similarly differences in soil qualities or climate may not only effect yields directly, but also indirectly through differences in the degree to which it is optimal labour use to try to maximize yields.
Table 18. Labour use in tobacco production on peasant farms in Urambo 1964/65.

<table>
<thead>
<tr>
<th>Task</th>
<th>Man-days per month per 1 ha.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of fuelwood</td>
<td>26</td>
</tr>
<tr>
<td>Seedbeds</td>
<td>18</td>
</tr>
<tr>
<td>Clearing</td>
<td>37</td>
</tr>
<tr>
<td>Cultivation</td>
<td>8</td>
</tr>
<tr>
<td>Planting and fertilizer appl.</td>
<td>-</td>
</tr>
<tr>
<td>Maintenance</td>
<td>-</td>
</tr>
<tr>
<td>Harvest and curing work</td>
<td>-</td>
</tr>
<tr>
<td>Construction work</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
</tr>
</tbody>
</table>

So from this digression attention is turned back to the main concern of the peasant producers, and to what ought to be the main concern of agricultural extension and research as well, namely the optimal return from overall production to available labour.

Unfortunately no study exists for the tobacco areas that relate output of different crops and crop combinations to the intensity, types, and distribution over time of work actually undertaken, and neither did we have the resources to collect such data. The few studies of labour use that do exist deal only with average working time spent per area unit on different tasks by the whole sample population and possibly the variation for each isolated task. But they do not indicate differences, e.g. in labour intensity and use of other inputs, between whole production processes, nor do they allow comparisons between such production processes and their corresponding outputs, which are the type of calculations the producers themselves have to make. There are also more concrete problems in the way they record very different types of work simply in terms of absolute time spent, using either working hour or working day (generally 8 hours) as their enumeration unit. It is not always clear for example whether the different number of hours a worker can work per day on different tasks, because of wide variations in energy demands, led to enumeration of all working days as 8 hour days irrespective of their actual length or not. And how is, for example, the curing process, which demands around the clock attention, but leaves time for the
Table 19. Man-days required to manage 1 ha of tobacco. Tabora and Urambo 1976/77.

<table>
<thead>
<tr>
<th>Task</th>
<th>Man-days/ha. (whole season)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedbed preparation</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>Seedbed maintenance</td>
<td>(23)</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>(26)*</td>
<td></td>
</tr>
<tr>
<td>Clearing</td>
<td>20</td>
<td>3–75</td>
</tr>
<tr>
<td>Cultivation</td>
<td>25</td>
<td>5–88</td>
</tr>
<tr>
<td>Ridging</td>
<td>24</td>
<td>5–105</td>
</tr>
<tr>
<td>Planting</td>
<td>12</td>
<td>3–40</td>
</tr>
<tr>
<td>Fertilizer appl.</td>
<td>12</td>
<td>3–63</td>
</tr>
<tr>
<td>Subtotal</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Pesticides appl.</td>
<td>5</td>
<td>3–25</td>
</tr>
<tr>
<td>Suckering, topping</td>
<td>41</td>
<td>10–150</td>
</tr>
<tr>
<td>Subtotal</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td>57</td>
<td>11–140</td>
</tr>
<tr>
<td>Curing</td>
<td>215</td>
<td>120–360</td>
</tr>
<tr>
<td>Grading</td>
<td>54</td>
<td>13–219</td>
</tr>
<tr>
<td>Transport</td>
<td>3</td>
<td>2–4</td>
</tr>
<tr>
<td>Subtotal</td>
<td>329</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>494</td>
<td></td>
</tr>
</tbody>
</table>

*a Standard figure for all growers. The study gives all figures in days/acre, but since the seedbed operations are only to a very limited extent correlated in terms of labour use with the subsequent field size, the original figure is also used here, and not transformed into 2 1/2 times as many days/ha. as for the rest of the table.

Table 20. Labour use in tobacco production on peasant farms in Tabora 1963/64.

<table>
<thead>
<tr>
<th>Man-days per month per 1 ha.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>All tasks</td>
</tr>
</tbody>
</table>

attendant to do other jobs – or rest – as long as it is done in the vicinity of the curing barn, accounted for in terms of working time?

In the last respect one study has arbitrarily accorded two working days to each 24 hour period spent at the curing process, and the norm is not known for the others.

Keeping in mind such reservations as to the approach and methods of the studies mentioned, it still seems possible in a limited way to use their empirical material (since it is the only such material existing) as a basis for
some important observations also within a different analytical framework.

Tables 18, 19 and 20 show the average labour use in tobacco production as recorded in three studies undertaken in Urambo 1964/65, Tabora and Urambo 1976/77, and Tabora 1963/64, and table 21 gives a summary of the comparable results.

The first thing to note is the similarity between the results, which is all the more striking, when one takes into account the insecurity and variations in sampling, interviewing, enumeration etc. in such studies and the wide range in individual answers as shown in table 19. Some of the differences that do exist between the tables are easily explainable by known real differences between the areas and seasons. In Tabora for example yields were still relatively low in 1963/64, which accounts for a smaller labour use in the harvest and processing period, and the growers had a larger proportion of their land under maize cultivation on which they would have to concentrate labour use in December–January, possibly at the expense of tobacco-work. Another example is clearing, which clearly demanded more work in Urambo in 1964/65, when most growers were opening up virgin forest for cultivation, than in the whole area in 1976/77, when much land was taken in use after secondary bush-fallow only.

These few remarks have already indicated some of the major factors involved in the determination of labour utilization, which the tables may be

---

**Table 21. Summary of comparable average labour uses in tobacco production, Urambo 1964/65, Tabora and Urambo 1976/77, and Tabora 1963/64**

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Urambo 1964/65</th>
<th>Tabora 1976/77</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Firewood)</td>
<td>(29)</td>
<td>(?)</td>
</tr>
<tr>
<td>Seedbeds</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>Clearing</td>
<td>51</td>
<td>20</td>
</tr>
<tr>
<td>Crop establishment</td>
<td>74</td>
<td>73</td>
</tr>
<tr>
<td>Maintenance</td>
<td>49</td>
<td>46</td>
</tr>
<tr>
<td>Harvest and processing</td>
<td>306</td>
<td>328</td>
</tr>
<tr>
<td>Total (less firewood)</td>
<td>504</td>
<td>493</td>
</tr>
</tbody>
</table>

---

**Man-days/ha/month on all tasks**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urambo 64/65</td>
<td>91</td>
<td>35</td>
<td>44</td>
<td>55</td>
<td>85</td>
<td>86</td>
<td>92</td>
<td>55</td>
<td>17</td>
<td>2</td>
<td>563</td>
</tr>
<tr>
<td>Tabora 63/64</td>
<td>122</td>
<td>40</td>
<td>40</td>
<td>25</td>
<td>33</td>
<td>67</td>
<td>67</td>
<td>67</td>
<td>17</td>
<td>5</td>
<td>483</td>
</tr>
</tbody>
</table>
used to illustrate, i.e. ecological conditions, the intensity/extensity of production, and the possible crop combinations.

As the figures all relate to average labour use per area unit, they are most immediately useful for demonstrations of the effect of manipulations with the areas cultivated, on labour use and for indications of the limitations posed by the availability of labour on the possible range of such area manipulations. For this purpose the intensity of cultivation implied by the average labour use figures and the resulting outputs will be regarded as constants.

Since the only other crop of major importance in most tobacco areas is maize, the following considerations will, for the sake of clarity (as well as because of the lack of data on other crops), be confined to tobacco and maize as alternative uses of labour.

The available data on labour use in maize production, which are of the same nature as the tobacco data, but even more scanty, are presented in table 22.

Apart from missing more recent data, we are also confronted with more problems by the information that does exist, than was the case with the tobacco figures. Apparently labour intensity was twice as high in Tabora as in Urambo for no obvious reasons. Elsewhere the Tabora study is furthermore quoted for lower total labour use figures, i.e. 9812 and 12513 respectively. The relative distribution of labour over time corresponds, roughly however, between the two sources, and also with our observations in the field. The heaviest work load is during the crop establishment period,

Table 22. Labour use in maize production. Urambo 1964/65 and Tabora 1963/64.

<table>
<thead>
<tr>
<th>Man-days/ha.</th>
<th>Whole season Urambo10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing, cultivation, planting</td>
<td>34</td>
</tr>
<tr>
<td>Maintenance</td>
<td>18</td>
</tr>
<tr>
<td>Harvest</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
</tr>
</tbody>
</table>

| Man-days/ha./month, Tabora11 |
|-------------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| All tasks | _ | 13 | 33 | 47 | 10 | 18 | 17 | 5 | 142 |
Table 23. Model labour use in 0.8 ha. tobacco and 1.6 ha. maize peasant farm and at alternative crop-combinations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8 ha. Tobacco</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuelwood</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>Clearing</td>
<td>25</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30</td>
</tr>
<tr>
<td>Seedbeds</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30</td>
</tr>
<tr>
<td>Cropestablishment</td>
<td>- 25</td>
<td>25</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>60</td>
</tr>
<tr>
<td>Maintenance</td>
<td>-</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40</td>
</tr>
<tr>
<td>Harvest etc.</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>30</td>
<td>55</td>
<td>65</td>
<td>65</td>
<td>25</td>
<td>5</td>
<td>25</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Total 0.8 ha. tobacco</td>
<td>55</td>
<td>40</td>
<td>35</td>
<td>25</td>
<td>45</td>
<td>65</td>
<td>65</td>
<td>25</td>
<td>5</td>
<td>425</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 ha maize</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total 0.8 ha. tobacco + 1.6 ha. maize</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>60</td>
<td>60</td>
<td>70</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>Available labourdays&quot;</td>
<td>243</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>972</td>
<td></td>
</tr>
</tbody>
</table>

Alternative crop-combinations

<table>
<thead>
<tr>
<th>0.9 ha. tobacco +</th>
<th>1 ha. maize</th>
<th>0.8 ha. tobacco +</th>
<th>2.3 ha. maize</th>
<th>1 ha. tobacco alone</th>
<th>3.7 ha. maize alone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62</td>
<td>45</td>
<td>64</td>
<td>63</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>40</td>
<td>71</td>
<td>75</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>69</td>
<td>50</td>
<td>44</td>
<td>31</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>58</td>
<td>81</td>
<td>58</td>
<td>23</td>
</tr>
</tbody>
</table>

* Calculated for a 3.25 mean family labour force and 25 work days/month.

November to January, and equal amounts of labour are used in maintenance (esp. weeding) January to March, and harvesting, April to June. According to our observations (in 1976–77) the main harvest period, though, was May–June, rather than April–May as indicated by the studies quoted, which may be due to more recently introduced longer-growing varieties.

To get around these problems with the existing data, we have for the sake of the following analysis chosen a total of 100 man-days/ha. distributed with 50:25:25 days between the task categories and periods indicated above, as a reasonable approximation to the average labour intensity and distribution in maize production over a year. A similar approximation has been made for tobacco from the existing data as summarized in table 21 above. On this basis the following model labour use profile for an average 0.8 ha. tobacco and 1.6 ha. maize farm has been constructed (table 23).

Table 23 shows that, under the given preconditions (concerning labour intensity in tobacco and maize production respectively) the model farm
The harvest and curing period is the labour peak in tobacco production. (Here the leaves are tied to sticks before being hanged in the barn, which must be done on the day of their harvest.)

Combining 0.8 ha. tobacco with 1.6 ha. maize reaches a maximum labour use of 75 man-days per month in the peak tobacco harvest season, i.e. March to May. This gives only a small margin of extra labour and labour available for other tasks in relation to an estimated total labour availability of 81 man-days/month. Also the cultivation and planting period for both crops, November to January, shows a fairly high rate of labour utilization, while the real slack period is confined to three months, July–September, only. July–September is the dry season when most construction work on houses, barns, and wells take place, and when water for household use may have to be collected from distant sources, neither of which tasks are included in the table.

Such an average peasant tobacco farm would therefore seem to involve its labour force in a well distributed and very intensive utilization of labour compared with reports from other systems of peasant agriculture. This becomes even more clear after a look at alternative combinations of the two crops, the effects of which are indicated at the bottom of table 23. Here it is demonstrated, that (still under the given conditions) even a small increase in the tobacco area, from 0.8 to 0.9 ha. with an unchanged 1.6 ha. maize
would hit the 81 man-days/month ceiling in the harvest period from February to May. Even if the maize area were reduced to zero the family labour force would only allow an increase in tobacco area to 1 ha., which would also, however, give a much more biased distribution of labour use and therefore a lower total utilization of available labour. On the contrary it should theoretically be possible to increase the rate of total utilization of labour by increasing the maize area from 1.6 ha. to 2.3 ha. while maintaining 0.8 ha. of tobacco, before the available labour days are exhausted in any one month. Relinquishing tobacco completely would give a labour potential for cultivation of 3.7 ha. of maize, but with a very biased and low rate of overall labour utilization.

Obviously realistic considerations are not done as mechanically as this, even when limited purely to the labour effects of alternative combinations of the two crops. For example the labour intensity and its distribution for any one of the crops, which we have so far taken for granted, is in fact in itself to some extent dependent on the crop-combination, which is clearly demonstrated in the case of the "maize alone" alternative.

Here it would be quite feasible to increase the cultivated area beyond the 3.7 ha. maximum given in the table simply by distributing cultivation and planting more evenly between November, December and January, than is the case in the model because of the December slack in tobacco's labour demand. On the other hand, maize is usually grown after tobacco on the same land, so in the absence of any tobacco production more labour would have to be spent on clearing and cultivating the land for maize. Anyway, the model as presented seems useful as a point of departure even to illustrate the further complexity of such situations.

Also more variables may be drawn in, in order to broaden the analysis. While the intensity of cultivation continues to be taken for granted, we may also accord average yield values and average input costs to areas of cultivation, and average per kg. prices to the harvested crops.

Figure 2 illustrates the theoretically possible substitution between tobacco and maize areas under the presumptions given in table 23.

The substitution rate of tobacco area to maize area is 1:13 between A and B, 1:3.6 between B and C, and 1:1.4 between C and D. This means that only if the net value of output from 1 ha. tobacco is 13 times bigger than the value obtained from 1 ha. maize is it optimal for the grower to grow only tobacco. If the tobacco output value is between 3.6 and 13 times as large as the value of the maize output then B would be the optimal point, while it would be C at a tobacco output from 1 ha. that is only worth 1.4 to 3.6 times as much as the output from 1 ha. of maize. If the net value finally is less than 1.4 times more for tobacco than for maize, then it pays to grow only maize.
To mention just a few examples: At an average tobacco yield of 700 kg./ha., an average piece of 7 shs./kg., and average inputs costs per ha. of 1,900 shs., the average net income is 3,000 shs./ha. tobacco. Only a net maize income of less than 230 shs./ha. would make it optimal to grow tobacco only, which could be the case with yields around 8 bags (720 kg.)/ha., a market price for maize at 45 cents/kg., and 100 shs. input costs. To make concentration on maize alone the optimal choice, would demand a net maize income per ha. of more than 2,150 shs or a 32 bags/ha. yield at the present official producer price of 0.80 shs./kg and 150 shs. average input costs.

As already mentioned above, the producer's evaluation of maize as the main food crop, may, however, vary depending on the quantity produced and the consumption needs of the household. As long as less than the household's own consumption is produced, maize must be valued in the calculations at least at its official consumer price, perhaps even higher because of shortage risks. If there is just a small surplus above or a small deficit below the household's needs it may be realized or covered in the local market, where the price is usually lower than the official consumer price, but higher than the price obtained from the official marketing channels the producer normally has to use in order to sell a larger surplus. So the producers are likely to operate with a decreasing value of maize produced over and above the household's own needs and an increasing value at a production falling below these needs.
The result should be a tendency towards an optimal crop combination, which just allows the household's food needs to be covered (for safety's sake perhaps not just at average maize yields but even in bad years with less than average yields) unless the yield and price differential between tobacco and maize becomes extremely wide, when there would be a concentration on tobacco, or so small that it pays to grow only maize for sale in the official market.

It is in this perspective that we can in a very simplified way explain the relationship (discussed also above in chapters II and III) between the relative fall in tobacco producer prices compared to maize prices and the trend among the producers to revert from almost pure tobacco (commodity) production around 1965 to a higher degree of mixed tobacco – maize production in recent years. Hereby they have reached near self-sufficiency in the basic subsistence crop, and have in some areas with low tobacco yields (e.g. Igagala) even moved towards emphasis on commercial maize production as an alternative cash crop. At the same time total average incomes have gone down considerably while the overall utilization – or exploitation – of the family labour force has intensified.

It may thus be taken as an example of the so-called "backward-sloping supply curve" for peasant agriculture, where falling prices and incomes lead to intensification of labour use and increased production – in this case, however, an increased production of the alternative subsistence crop accompanied with a decrease in the supply of the cash crop (not an increase as the curve implies in its simple form). It is also an important example of the peasants' ability, however limited it may be, to react against increasing exploitation through the market forces.

In all the considerations above we have assumed, for the sake of illustrative clarity a constant average intensity and distribution of labour and other inputs per area unit of each crop. This is of course much too simplified compared with real life conditions. It is true that the crop combination is one aspect of the production process, which the producer can manipulate to achieve an optimal result, but it is by no means the only, nor necessarily the most important one. Other possibilities, which we have already touched upon, are to reduce or increase technical inputs use and costs, with effects on output or labour intensity – or both – as discussed in Chapter VI, or to vary the intensity and distribution of labour input directly.

It is clear from table 23, for example, that even if the average 0.8 ha. tobacco and 1.6 ha. maize peasant household could increase its output and net income per hectare of tobacco by using the recommended fertilizer application ratio, instead of the smaller actual average ratio, this might not increase its consumption ability. An increased yield would also boost the
labour need for harvest and curing, which is already the peak labour season, thus possibly forcing the producer to reduce the tobacco area. The labour released in the cultivation period may of course be used to grow more maize, but as the household already covers its consumption needs from 1.6 ha. of maize the net income from the increase may not be large enough to balance the extra costs of tobacco inputs, with which it all started.

Similarly it may lead to a better distribution of labour use to extend the cultivated area rather than to use some of the recommended yield increasing methods, that demand more intense labour use in the growth period when harvesting and curing is also starting to take place.

To obtain systematic quantitative data on all these variables and their variations and interdependencies would demand both extensive and very intensive, detailed research, which has, at least so far, not been undertaken at all. Consequently no scientific basis exists for imposing simple generalized recommendations or regulations on the peasants' complex labour processes, that can always be expected to optimize the results. On the contrary the producers have clear objective reasons for resisting any uniform application of extension service and scheme management preoccupations, such as prescribed locations, sizes, and forms of the fields, and "proper" (supposedly yield increasing) working methods, that almost inevitably implies harder work if nothing else. While the peasants have no influence on the market prices, grading systems, conditions for obtaining credit, interest rates etc., they have an obvious interest in maintaining as much freedom of choice within these limitations as possible, in order to be able to pursue an optimal combination of land use, crops, cultural practices, labour, other inputs, and outputs, based on their individual experiences, resources and needs.

When external forces try to interfere directly in the labour process or in closely related conditions of peasant production, whether the current emphasis is on tobacco growing methods or on compulsory planting of cassava as a "hunger reserve", it is commonly regarded by the peasantry as yet another way of exploiting them rather than as an effort to develop their productive forces. They often have a simple, but clear understanding of the general relations of simultaneous mutual dependency and conflicting interests between peasant agriculture and the rest of society, where their control over the direct labour processes is the only power base the peasants have. That is enough, however, to give them the advantage of passive individual resistance, which is so difficult for outside intruders to overcome without reverting to ever increasing compulsion and control measures that may easily become more costly than the benefits gained.

In the Tanzanian tobacco areas the result has been an unsteady balance
between policies that emphasize indirect incentives and disincentives as means to influence peasant production and policies of direct interference through regulations and control. But before passing on to analyse some of these policies, the institutions involved, and their interests in influencing peasant production, the peasant labour economy must also be discussed in terms of its internal dynamics as a condition for and a limitation on the development of the productive forces.

There is no doubt that the very introduction of tobacco growing among former mainly subsistence producing peasants constituted a major jump forward with regard to the complexity of the organization of production, the agricultural methods used, the economic and social integration of the peasantry in the wider society, and as a result of this also with regard to both the peasants' own level of consumption possibilities, the economic surplus that can be extracted from peasant production, and the channels through which this extraction takes place.

The conditions for such a development were the technical characteristics in a wide sense of tobacco production itself – as described in Chapter VI – together with the establishment of a labour economy directed towards commodity production, but where the commodities have no definite production price and labour use is not determined by marginal returns.

But after the initial development of the productive forces the situation can best be described as stagnation at a higher level. Although the total production of tobacco has, except for the last couple of years, continuously shown an impressive growth, this is the result of a steady increase in the number of growers rather than improvements in productivity. There are no indications of major changes, positive or negative, in the production processes since the introduction in the late fifties of the small-scale curing barn, which was the precondition for the present pattern of highly individualized household production.

In the wake of the establishment of individualized household commodity production the preexisting "horizontal" socialization of labour, i.e. different forms of cooperation and mutual assistance as well as specialization and exchange within the local community, was replaced by "vertical" hierarchies of specialization, where peasant households isolated from each other, but through identical production processes produce primary goods for and receive processed goods from the "higher levels". This atomization of the production sphere in the peasant communities resulted partly from new external relations directly involving the individual households; partly from the fact that tobacco production has attracted many migrants from other parts of the country to the sparsely populated tobacco areas, so that their present population has very mixed social, cultural and linguistic
backgrounds; and finally partly from the commercialization also of many internal relationships within the peasant communities.

In the sample villages in Urambo, for example, the common language is Swahili and not the mother tongue of any particular tribe. The people have day to day neighbour relations and drink beer together over the weekend, but a traditionally important social relation like beer drinking is here commercialized in the sense that anyone brewing beer announces it in the neighbourhood as a public occasion and sells the beer to anybody who turns up in response to the announcement.

For family celebrations, on the other hand, relatives from the dispersed home-areas are invited rather than neighbours, and the tobacco growers are frequent travellers going on visits to the home-areas. So when strong social relations are maintained outside the immediate family, they are mostly separated from the production sphere.

There have been opposite trends towards renewed socialization of labour processes within the tobacco communities, but so far none that have had a lasting impact on the productivity, methods, and organization of production.

One form, i.e. large scale production with hired labour, was witnessed in some of the early tobacco schemes (like Urambo, as described in Chapters II and III). The scheme regulations and very high producer prices deliberately favoured development of "family enterprises", concentrating on commercial tobacco production based on regular employment of seasonal migrant labourers. But the high marginal returns to labour in the tobacco season did not only make it favourable for the peasant households to employ migrant labourers in the peak periods to complement household labour; it also turned tobacco production into an investment object, since large-scale production combining capital in buildings, machinery and migrant labour was highly profitable. But as soon as producer prices went down, irreversibly and significantly, the capital was withdrawn and invested in more profitable alternatives. The peasant producers on the other hand remained, as they had no better alternative way to secure their survival, even at the reduced level. They reacted, however, by reducing their hired labour force and reorganizing production to achieve a better utilization of household labour. Today labour constraints are in general reduced by spreading the labour intensive activities over time, rather than overcome by employing labour. Only in the case of occasional urgent bottlenecks is it still normal to hire labour, for example in periods of illness in the family, when late rains causes a need for rapid cultivation and planting, or when an unusually good yield threatens to mature in the field for lack of man power to harvest and cure it.

The other form of socialization of labour in primary production to be
mentioned here is the cooperative and collective production, which was partly a spontaneous phenomenon, partly officially imposed in tobacco complexes and in the ujamaa villages in Iringa. Only in the small, voluntary, closely knit groups and limited to certain harvesting and curing operations did it prove viable. Otherwise the technical development of tobacco production does not seem to lend any advantage to cooperative work.

The alternative to overcoming the labour constraints through hired migrant labour or cooperative work would be introduction of labour saving methods in the peak season tasks. Research and extension have, however, been mainly directed towards yield increases, which are more or less directly correlated with growing labour use in the peak harvest season.

There is no obvious way to increase productivity in the harvest and curing process, but several possibilities should be investigated. On harvest days it is not the picking of the leaves itself, but the transport of the heavy bundles of wet leaf from the field to the barn that is the most energy consuming task. Ox cart transport would seem a possible solution, since it is not a very feasible solution to place fields and barns closer together because of the shifting cultivation and the peoples' aversion against staying out in the fields at night, while supervision of the curing has to be maintained around the clock.

Another possibility is improvement of barn construction to make them more stable and economic users of firewood, which would be of particular importance if it was combined with slightly larger barns and more widespread cooperation in harvesting and curing within small groups of households. This would make it possible for each household to have its fields harvested more than once a week, which improves quality, while supervision of curing would also be rationalized. One ox cart would have the capacity to serve a whole group, avoiding overcapacity and the individual household's reluctance to undertake such an investment. But only by working with small voluntary groups of people, who know and trust each other – and can put sympathetic pressure on each other – and with a simpler and safer curing process, would it seem possible to overcome the problems of mutual distrust in each others skills and care that seemed the primary cause for the break up of earlier cooperative curing ventures.

Also storing, sorting and grading, and transport of the cured leaf could benefit from technical improvements – technical improvements that is that clearly reduce the work in relation to output and not just increase both output and work.

But even with such reductions in labour needs in the peak periods the scope for expanded production is limited because of the fairly intense labour use distributed over the whole cultivation season from October to May, with the present crop combinations and organization of labour processes that
already aim at spreading out the labour peaks. A further development of the productive forces would therefore have to attack also the general productivity of labour. Here yield increasing measures do of course come in, but unless they imply very spectacular breakthroughs, e.g. in the form of new varieties, they are often felt by the producers simply as intensifications of labour with little improvement in returns to labour. Especially of course when the increased quantity of total output is reduced in value by falling producer prices or increased input costs. Selective efforts to reduce the most backbreaking and energy consuming types of work are likely therefore to have a more immediate impact, as long as they do not involve costs that would reduce the overall return to available labour, and – it must be stressed again – follow after reduction of the peak period labour constraints.

Such measures could include ox- or donkey carts of which some are actually in use in the tobacco areas to transport fertilizers and firewood within the village area, and perhaps improved tools for cutting firewood and clearing the land (but not bulldozers!). When introducing work oxen in the villages it seems a mistake, however, in general to emphasize their usefulness in cultivation rather than transport, as the dense forest in many tobacco areas makes it too tedious to clear out all the roots before the oxen can manage to plough new land, while the sandy soils makes secondary cultivation a relatively easy manual job that is often combined with immediate planting. This at least was the explanation, given by tobacco growers originating from areas where oxploughs are in common use, for not using them in tobacco production.

To be feasible several of the possible improvements indicated above demand some degree of cooperation between a number of households in some of their working processes and/or in undertaking the necessary investments. But so far the economic infrastructure has not been organized to cater for such needs, e.g. with regard to provision of credit and physical inputs. And neither has the administration and extension service been geared towards support for spontaneous groups on their own conditions. It is possible that the new village structure has the potential for doing it, and thus for hosting a gradual initiation of changes in the relations of production and development of the productive forces, but it is still too early to say if that is the case and whether it will have other consequences in terms of the relationship between the peasantry and other forces in the country.
Notes

1. See p. 56.
3. a. "The economics of tobacco production in various tobacco growing districts of Tanzania". Ref. 37/1121257 TRDB, Mbeya.
b. Urambo District office statistics.
c. see above, table 3.
b. Schemer, op.cit., p. 113.
5. a. Schemer, op.cit.
b. A report on the comparative economics of Virginia and aromatic tobaccos on family farms in Tabora District, M.P. Collinson, Mimeo, Western Research Center, Min. of Agriculture, Tanzania 1965.
6. Note 5 (c).
7. Note 5 (a).
8. Note 5 (c).
9. Note 5 (b), as modified in "A feasibility study of the development potential and feeder road improvement in the Tabora Region". Final Report App. 1. Brokonsult AB 1974 for Ministry of Commerce and Transport, United Republic of Tanzania/ SIDA. Table 1.3.G.
10. Note 5 (a).
11. As note 9.
12. Quoted in note 5 (a).
CHAPTER VIII

Production under Close Supervision

The "success story" of the development of peasant tobacco production in Tanzania has often been assigned to the way tobacco was introduced and is maintained as "production under close supervision".

In recent years more and more development programmes directed towards small-scale agriculture have taken this form, so it is also of a more general interest to try to draw out some of the Tanzanian experiences.

All small-scale flue-cured tobacco production in Tanzania has been developed under conditions of relatively high intensity of extension and supervision compared to production of other, especially food-crops. The technical complexity, the input intensity, and the high, but very quality dependent, value of tobacco have served to justify such a concentration of personnel and capital, the hypothesis being that given this nature of the crop it is advantageous in the production process to follow certain prescribed rules, to which the output is very sensitive, and that for lack of close supervision the growers, nonetheless, do not (can't, won't) follow those rules.

Consequently the intensity of extension service personnel allocated to tobacco has varied over areas and time within a range of only 20 to 150 grower families per extension officer, while the national average rate for all crops together has been more than three times as high as the latter, upper limit for tobacco.¹

Despite the high general intensity, there has also been, as shown by the range mentioned, a great variation between areas and at different times. Introduction and development of peasant tobacco production has in fact been subject to so many distinctly different approaches, within the broad terms of "production under close supervision", that one might be tempted to think it has been a deliberate experiment in comparative peasant production schemes. That is of course not the case, so unfortunately, any ex-post comparison will have to do without controlled environmental conditions, equal population sizes, and directly comparable data on investments, inputs and outputs, not to mention such a thing as time series of data on the same variables in different schemes. Nevertheless the relatively long experience with very different ways of organizing small-scale production of the same crop in areas which – at least from existing information – seem to be ecologically fairly similar, provides a rather unique
chance for comparison, which we shall try to exploit as far as the availability of data allows.

Small-holder production of flue-cured tobacco was first introduced on the Tumbi and Urambo schemes in Tabora region in the mid-fifties. The development of the two schemes has already been described in Chapter II, and may for the present purpose be summarized as follows:

After an initial phase of outgrower production, where only a limited part of the whole production process took place on the outgrower's own plots, both schemes had by 1962 reached a situation where individual grower households were in charge of the whole process from the raising of seedlings to the grading and baling of the cured crop. Infrastructure, extension service, marketing structure, and inputs and credit were provided by the schemes.

_Urambo_ was a settlement scheme with large scattered forest plots allocated to each household, and a correspondingly elaborate scheme infrastructure. Admission was strictly controlled and much emphasis was placed on selection and training of new settlers. Production methods, use of inputs, and the individual growers' pace of expansion of production were regulated by the scheme authorities, but there was no upper limit on individual hectare. The main sanctions for transgressing the rules were reduction in credit terms and outright expulsion from the scheme, the latter being the most final and therefore detering sanction.

_Tumbi_ was a licensing scheme, i.e. it was based on preexisting peasant farms in its area of operation (including spontaneous immigration). Prospective growers were given an annual licence to grow tobacco under conditions specified by the licensing authority. One important regulation concerned the limited area of tobacco each license holder was allowed per year. Using the existing infrastructure or depending on the peasant's own efforts in this respect Tumbi was less heavy on scheme investments and general scheme costs than Urambo. On the other hand a higher intensity of supervision (and small plots) was regarded as necessary in Tumbi, perhaps because of the rather liberal distribution of licenses and their subsequent withdrawal being the main, and less serious, sanction, compared with the careful selection of the Urambo settlers and the detering expulsion sanction used there.

After 1965 restrictions, sanctions, and intensity of supervision were reduced in both schemes, as well as in similar new schemes in Tabora Region. For a period the authorities relied more on "incentives" in the form of differentiated credit terms and a new complex grading and pricing system.

Villagization has been followed by new trends towards blockfarming, which facilitates supervision, and renewed emphasis on infrastructural
development and regulation of production, e.g., (minimum) size and location of plots, proper use of inputs, agricultural methods, etc.

The successful establishment of peasant tobacco production in Tabora was followed by its introduction in Iringa Region, where large European owned farms had already produced the crop for some time. In 1962 two schemes were started in Iringa. One, Kiwere, was a village settlement which according to Feldman² was planned and run as a closely supervised and highly capitalized production unit. The settlers were responsible for growing and curing their own tobacco crop, but these activities and their acreages were strictly controlled by the managerial staff. The manager had the authority to recruit, discipline and even expel individual settlers. Substantial investments in such assets as piped water supply, school, dispensary, and managerial housing have been made. There are centralised packing and grading facilities. The nurseries for the tobacco seedlings, and mechanical land preparation are also organised by the scheme's management on a centralised basis. The settlers live in three concentrated villages which are separated from their tobacco crop. Although all the decisions regarding the organisations and investments for the scheme are made by the manager, or the Village Settlement Agency in Dar es Salaam, the ultimate financial responsibility for the repayment of the capital costs, as well as the current scheme expenditure, belonged to the settlers.

Kiwere thus typifies the transformation approach to rural development in Tanzania. The settlers occupy a position between that of an independent farmer and a hired labourer. There is a close centralised control on their own decisions, and a number of choices are made directly by the officials over which they have no influence, yet the settlers are meant to carry full financial responsibility. They are cushioned from this in the early years by the deliberate managerial decision to allow both the scheme's capital costs, and a large part of the scheme's, and the settlers' current costs, to remain unpaid to be capitalised for future repayment.

Kiwere thus appeared in marked contrast to the independent growers of the Karume cooperative. Initially they consisted of former tobacco labourers who spontaneously settled in Nduli not far from Kiwere, and started producing tobacco as soon as earlier restrictions preventing this were lifted in 1962 and extension and credit became available for small African growers. Later they were rapidly joined by others, and Feldman gave the following description:

The (Nduli's) small-holders make all production, processing and marketing decisions as individual decision makers. They are free to accept or reject advice given by official agencies. The only government sanction is through control of credit funds which can be stopped if the farmer defaults on payments of previous loans. The farmers live on their tobacco holdings scattered through the area. This is preferred to living in villages because the farmers need to maintain a careful watch on the crop and to protect the considerable fixed capital assets they need to accumulate. Centralised services are provided by the co-operative society which owns two tractors, and hires others, and acts as a buying agency for inputs such as seeds, fertiliser, and implements, and as a channel for the government credit funds. The farmers themselves have started,
evolved, and control both their production organisations and co-operative society. New production systems have developed as a result of the responses of peasant farmers to new opportunities. The Government's role has been limited to the provision of the improvement services: extension advice and credit funds."

From 1966 onwards producer prices dropped and recorded yields went down considerably, especially in Nduli. Feldman quotes a general suspicion, that growers were selling their crop indirectly through the large European farms, circumventing the cooperative marketing system and thereby avoiding deduction for their debts. In 1968 Kiwere was reorganized along the same lines as the Karume cooperative, and any element of cooperative production, e.g. communal barns, was broken up. Both Kiwere and Karume got new injections of financial support from the government, while direct supervision was relaxed, just as in Urambo and Tumbi.

In 1972 a new reorganization of peasant tobacco production took place in Iringa region. The Karume cooperative was abolished with an accumulated debt of more than 4 million shs., while Kiwere, along with other similar schemes, was turned into a tobacco ujamaa village with communal production under renewed close supervision.

Since then small-scale production in Iringa has been limited to such ujamaa villages and their overall output has remained smaller than total small-holder output in the early sixties.

The 1972 reorganization in Iringa was part of that World Bank financed drive to expand tobacco production, which in Tabora took the form of 'Tobacco complexes', as already described in Chapter III. These were also initially based on communal production, which was, however, abandoned in 1973 to make way for villages more similar to the post-villagization villages elsewhere in Tabora Region.

Both Schemer and Feldman had, among other things, used their studies in Urambo and Tumbi, and Kiwere and Nduli, respectively, to compare the economic effects of the different approaches to small-scale tobacco production they represented. Both of them reached the conclusion that the schemes with less regulation and lower intensity of supervision, i.e. Urambo and Nduli, were also the most economic producers of tobacco.

In table 24 we have tried to organize some of the data on which they based their conclusions in a similar way for both studies. They are still not strictly comparable, since we don't know all the possible differences between the two surveys, but they are illustrative of the same comparisons that can be made within the frame of each of them separately, i.e. between Urambo and Tumbi on the one hand and between Kiwere and Nduli on the other.

The most striking difference is between Kiwere and Nduli, where Kiwere has both much higher capital investments, scheme overhead costs, and costs
Table 24. Intensity of supervision, investments costs and incomes in 4 different tobacco schemes in Tanzania, 1964/65

<table>
<thead>
<tr>
<th></th>
<th>Urambo</th>
<th>Tumbi</th>
<th>Kiwere</th>
<th>Nduli (sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of growers</td>
<td>1310</td>
<td>1570</td>
<td>130</td>
<td>70⁺</td>
</tr>
<tr>
<td>Ha./grower</td>
<td>1.4</td>
<td>0.7</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Yields, kg/ha.</td>
<td>770</td>
<td>580</td>
<td>1180</td>
<td>980</td>
</tr>
<tr>
<td>Value, shs./kg.</td>
<td>7.29</td>
<td>7.10</td>
<td>5.05</td>
<td>6.72</td>
</tr>
<tr>
<td>No. of growers/supervisor</td>
<td>58</td>
<td>30</td>
<td>22</td>
<td>55</td>
</tr>
<tr>
<td>Scheme capital*, shs./grower</td>
<td>2500</td>
<td>900</td>
<td>3200(2200)</td>
<td>900</td>
</tr>
<tr>
<td>shs./ha.</td>
<td>1800</td>
<td>1200</td>
<td>6700(3000)</td>
<td>1200</td>
</tr>
<tr>
<td>shs./kg.</td>
<td>2.40</td>
<td>2.10</td>
<td>5.70(2.50)</td>
<td>1.20</td>
</tr>
<tr>
<td>Total costs of production:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>shs./grower</td>
<td>2500</td>
<td>1200</td>
<td>3300</td>
<td>2900</td>
</tr>
<tr>
<td>shs./ha.</td>
<td>1800</td>
<td>1600</td>
<td>6700</td>
<td>3700</td>
</tr>
<tr>
<td>shs./kg.</td>
<td>2.40</td>
<td>2.80</td>
<td>5.70</td>
<td>3.80</td>
</tr>
<tr>
<td>Net income⁺, shs./grower</td>
<td>5200</td>
<td>1800</td>
<td>-400</td>
<td>2200</td>
</tr>
<tr>
<td>shs./ha.</td>
<td>3800</td>
<td>2500</td>
<td>-800</td>
<td>2800</td>
</tr>
<tr>
<td>shs./kg.</td>
<td>4.90</td>
<td>4.30</td>
<td>-0.70</td>
<td>2.90</td>
</tr>
<tr>
<td>Total costs/Total incomes</td>
<td>0.32</td>
<td>0.39</td>
<td>1.18</td>
<td>0.57</td>
</tr>
</tbody>
</table>

of supervision of production, than Nduli, resulting only in a slightly higher average yield, but on a smaller area per grower, and at a lower average price. Consequently Kiwere shows negative net incomes per grower, per ha. and per kg. produced, whereas the Nduli growers had reasonably good net results. In Feldman's analysis the difference is not so extreme in the following years, which seems mainly due, however, to the drop in reported yields in Nduli, mentioned above as being not quite in correspondence with the real situation.

Comparing Urambo, with less intensity of supervision, with Tumbi, which had the higher intensity, the figures again indicate the economically favourable situation prevailing under less rather than higher intensity of supervision. The difference was not so significant, however, as in the case of Kiwere and Nduli, since the high costs of scheme overheads, depreciation of capital investments, and interests in Urambo settlement scheme almost balanced the higher costs of supervision in Tumbi.

It is difficult to make similar comparisons for later changes in the organization of tobacco schemes, since it is impossible to get data on scheme investments as well as on running costs of administration and supervision.
An agricultural extension officer inspects tobacco seedbeds, but actually there is little she can do if anything goes wrong at the very vulnerable stage in the life of the tobacco plant.

What we can say, however, is that recent figures, given in Chapters II and III on average hectarages, yields, and prices obtained in Igagala complex, Urambo and the TTGCS area respectively show no sign of any correlation with the concentration of extension personnel, which was highest in Igagala with one extension officer per 67 grower families in 1973/74 and per 78 families in 1976/77, medium in Urambo with one extension officer per 110 growers in 1974/75 and lowest in the TTGCS area where it must have been below the overall regional average of one per 147 growers in 1975/76. Similarly there are no indications, that the general relaxation of extension control, implied by these figures as compared with those given in table 24, has had any direct – negative or positive – impact on the economics of tobacco production at the farm level. Or that types of settlement, block farming etc., supposedly facilitating the work of the extension service, has ever thereby had such an impact.

Although none of what has been said here is conclusive, because of the weakness and incomparability of the data, it does all point in the same direction, namely that there is little, if anything, to be gained from very strict regulation and control over peasant production, even of a complex crop like tobacco. This would seem to be due to several complementary reasons: The
inflexibility and sometimes outright technical incorrectness of extension regulations and advice; the ability of the growers to circumvent the regulations even in the face of high intensity of supervision; the costs of supervision; and the costs incurred by the growers in terms of extra manpower and inputs used to follow the official recommendations at small – if any – marginal gains in output.

It is characteristic, furthermore, that neither of the studies made, nor any official reports or plans, deal with the problem of recommended practices, regulations and supervision in terms of the peasants' labour use, although it is a general fact that almost all such recommendations imply intensification of cultivation, the benefit of which the peasant has to judge by weighing the marginal income against both extra input costs and opportunity costs of the extra labour.

As it was demonstrated in the previous chapter it is next to impossible to give any general rules on methods that are optimal in this sense. An extension service that primarily had the peasants interests in mind would not, therefore, be imposing such general rules – in one way or another – but would apply its technical knowledge to the specific labour conditions of the different peasant households, working together with them to enable themselves to find their optimal labour use and the corresponding agricultural methods.

If this is not usually the way it is, it may be because the peasants and the external institutions that deal with peasant production, e.g. the extension service, do not share the same common interests! Which would help to explain the apparent struggle between the peasants trying to avoid external interference in their production processes, and the ever recurring efforts to find new ways to impose such regulations on them.

Notes

1. According to Agricultural and Rural Development Sector Study, IBRD 1974(5) p. 49, the agricultural extension service had 0.4 degree, 1.5 diploma, 8 certificate and 7 untrained staff members per 10,000 farm families, or one member per 588 families. The Ministry of Agriculture's target for 1980 was one (upgraded) extension officer per 435 families.


3. Ibid. p. 16.


\(^a\) Total number of small-holders in Iringa. The rest of the table is based on Feldman's sample of 55 growers.

\(^b\) Scheme capital includes investments in roads, bridges, buildings, machinery etc. In Urambo the tobacco scheme took over very large infrastructural investments from the defunct groundnut scheme, many of which were left unused, so the figure in the table only includes Schemers estimate of the necessary investments for such a tobacco scheme. For Kiwere the figures in brackets show the situation after a further expansion of scheme population with 50% and of their average tobacco plots also with 50% at no extra capital expenditures and at present yields. In Nduli scheme capital included only 2 tractors bought by the cooperative. Office and storage space was rented and the costs included in running costs of the scheme.

\(^c\) Total costs of production includes running costs of the scheme, annuities including depreciation and interest (6%) on capital, and the growers expenditures on technical inputs. Only for Nduli do they also contain payment of hired labour, which gives the latter figures on upward (and the corresponding net incomes as downward) bias.

\(^d\) Value of production less total costs. These are not the same as the actual payments to growers, since the full scheme costs were not necessarily deducted from growers' incomes.

6. Information obtained from Igagala complex files and from TAT Tabora.
CHAPTER IX

Linking Peasant Producers with the World's Tobacco Industry

The Tanzanian peasant tobacco producers have always been heavily controlled by private, parastatal, or government organizations, monopolizing marketing, distribution of inputs, credit, extension service, and the right of intervention into agricultural methods. It does not seem to have made much difference in the ways these powers of control have been used vis-à-vis the peasants, whether they have rested with the colonial parastatal Tanganyika Agricultural Corporation (TAC), the East African Tobacco Company (EATCO, a subsidiary of the giant transnational tobacco conglomerate British American Tobacco Co. or BAT), with a combination of Ministry of Agriculture, Village Settlement Commission, local cooperatives and Tanzania Tobacco Board, or with the Tobacco Authority of Tanzania (TAT).

First of all they have been employed in inducing a one-sided emphasis on tobacco production at all levels in the areas concerned. Infrastructure and social services, marketing, distribution, and cooperatives, credit, and extension have all been directed towards tobacco production, both among existing producers and aimed at converting ever increasing numbers of peasants into tobacco growers. The high intensity of controlling power has furthermore allowed more direct intervention in, and efforts at regimentation of, agricultural systems and methods, than in most other peasant agriculture in Tanzania. And it has, finally, secured not only recurrent, speedy recovery of the economic commitments undertaken by those external agencies involved, but also a constant flow of handsome surplusses on top of that.

Changes in the conditions of production have occurred, e.g. the new export orientation of the industry after independence and the subsequent decrease in producer prices, the abolishment of preferential treatment for large growers after the Arusha Declaration, and villagization. Such changes have also influenced the relations of production, e.g. the disappearance of the tendency towards capitalist concentration (outside the Greek settler sector), the elimination of most channels for rich peasant (kulak) manoeuvres, and the entrenchment of subsistence production as the basis for reproduction of the peasant households.
But none of these developments have reduced the external control over the producers, nor have they questioned its means and objectives. On the contrary they have often reduced the bases for evasion, existing for all or some of the growers.

The frequent institutional reorganizations implied by the above list of organizations involved in tobacco promotion were sometimes related to changes in the conditions of production—and sometimes they were not; but in either case they have represented shifts towards constantly growing direct government stakes in the tobacco industry (and profits). Principal means and aims of development of peasant tobacco production were not touched.

The National Scene

The first institutions to be involved in promotion of African small-scale tobacco production in the mid-fifties were the Tanganyika Agricultural Corporation (TAC) and the East African Tobacco Company (EATCO). TAC was a colonial parastatal responsible for settlement schemes, which were already then an instrument in the government's modernization policies. Among its activities were establishment and administration of the Urambo Tobacco settlement scheme and later two other tobacco settlements, Lupatingatinga in Chunya District and Kiwere in Iringa. As settlement schemes they were highly capital intensive, primarily financed with government funds.

The initial aim was partly political, to establish a politically moderate class of commercialized African farmers, partly economic, to save foreign exchange through import substitution.

From the TAC schemes the cured tobacco was bought up by the EATCO, which had a tobacco marketing and processing, and cigarette manufacturing monopoly for all East Africa. In 1960 EATCO opened a cigarette factory in Dar es Salaam, which also undertook the intermediate processing of cured leaf.

In accordance with the worldwide policies of its mother company, BAT, EATCO was seeking to entrench its own dominating position in the East African market by actively supporting the development of local tobacco production. Not only by supplying the TAC with advice and expertise, but also by developing tobacco schemes of its own in Tanzania and Uganda.

Unlike the TAC, EATCO had few ideological, developmental overtones in their efforts to establish and expand tobacco production among the local peasantry, undertaken in order to secure a stable supply of raw materials for their cigarette production for the East African market. A supply that would not be subjected to varying world market prices and high customs duties.
As opposed to TAC’s settlement schemes, EATCO consequently opted for a much less risky and less capital demanding system, building on introduction of tobacco production on existing small peasant holdings, with few new infrastructural investments and less economic support to the growers.

Both types of schemes were, as we have seen, highly successful in terms of rapidly expanding production and involving increasing numbers of peasants in the market economy, primarily thanks to government protection, which initially allowed relatively high prices to be paid to producers. Also the growers were not charged with the costs of scheme investments and overheads, which in reality meant that EATCO got a government subsidized supply of raw materials from the TAC schemes, while financing only its own cheaper schemes from its cigarette profits. The government, on the other hand, benefitted from railway revenue, company taxes and foreign exchange savings.

After independence both TAC and EATCO had too much of a colonial ring to the nationalist ear, and the new government was furthermore bent on a course towards an ever more rapid expansion of tobacco schemes, aiming at the export market, which EATCO could not be expected to finance.

New cooperatives were established to take care of the local marketing and distribution of inputs. The government body responsible for implementation of its new "transformation strategy", the Village Settlement Commission, took over the administration of settlement schemes, while the tobacco extension service was transferred to the Ministry of Agriculture. The Tanganyika Tobacco Board was set up to take care of buying tobacco from the cooperatives, processing it, and selling it to local cigarette manufacturers or exporters. Finally the National Development Credit Agency was charged with input financing through extension of annual credits to the cooperatives.

While TAC was abolished completely, EATCO remained in business, now incorporated in Tanzania under the name of BAT (Tanzania) Ltd., but still, together with sister companies in Kenya and Uganda, fully owned by EATCO (UK), a subsidiary of BAT (UK). BAT (Tanzania) retained its most profitable activities, i.e. cigarette manufacturing, processing of tobacco for the Tobacco Board, and some tobacco exports, mainly to BAT (Kenya), which had similarly inherited EATCO’s cigarette monopoly there.

After the Arusha declaration, which among other things demanded government control over major industries, the Tanzanian government negotiated a takeover, against full compensation, of 60% of the BAT (Tanzania) shares by the parastatal industrial holding company, the National
Development Corporation (NDC). A management contract for BAT (Tanzania) was then signed with EATCO (UK), still the owner of the 40% remaining shares.

At the same time processing of raw tobacco was transferred from BAT’s factory in Dar es Salaam to a new processing plant in Morogoro, jointly owned by NDC and the Tobacco Board, but largely financed by a loan from BAT (Tanzania). One of the largest multinational leaf tobacco buyers and sellers, the Trans-Continental Leaf Tobacco Corp. (part of the even larger Standard Group) was given a management contract for this new Tanzania Tobacco Processing Co. and appointed as the Tobacco Board’s exporting agent.

In 1971–72 the development of a new line of tobacco settlements, the so-called ‘Tobacco complexes”, was started, to be financed with a 9 mill. $ (approx. 67 mill. T. shs.) IDA credit. Around the same time the tobacco industry was reorganized again, possibly in relation to this development, but also in line with the general government policy of streamlining and centralizing its control over export crop development. A new parastatal, the Tobacco Authority of Tanzania (TAT), was established to take over all responsibilities for development of tobacco production formerly held by the Tobacco Board, Ministry of Land and Settlement (successor to the Village settlement commission) and Ministry of Agriculture. With the abolishment of cooperatives in 1976 a large part of their functions (and personnel) were also transferred to TAT. Finally all NDC and Tobacco Board interests in the Tanzania Tobacco Processing Co. have been deferred to TAT.

This means that today TAT is solely responsible for development schemes, infrastructure and extension services in the main tobacco areas. Despite the 1972 decentralization of government administration and planning, and implementation of development programmes to regional authorities, TAT has a much greater presence in the tobacco areas than these authorities. For example in most of the villages in Tanzania the government officer in charge is the local extension officer from the Ministry of Agriculture, who is at the bottom of the regional administrative hierarchy and thus subjected to the authority of the Ward Secretary, the Divisional Secretary, the District Development Director, and the Area Commissioner (or Secretary). In tobacco growing villages, however, this position is taken by the TAT extension officer, whose principal responsibility lies within a whole parallel hierarchy ending in TAT headquarters in Morogoro.

TAT runs the whole chain of marketing activities, from buying cured leaf from the growers, keeping individual and village records of input credits and sales, transport, storage, grading, baling, and reprocessing, to sales abroad or to the local cigarette manufacturer.
Agricultural research for the tobacco growing areas is carried out by the TAT research station near Tabora, and TAT farms run trials in addition to raising seedlings to supply to new growers or growers whose own seed-beds have failed.

New expansions of the tobacco areas are planned by TAT and not necessarily in conjunction with local planning efforts. The only things which have not (yet) been brought under the wide TAT umbrella are procurement of annual tobacco inputs and their distribution, on credit, to villages, which is the responsibility of the Tanzania Rural Development Bank (TRDB), and cigarette manufacturing in the Dar es Salaam factory.

The TRDB succeeded the National Development Credit Agency in 1971 as the government's main agency for rural credit, while, although it is a bank, it does not cater for savings deposits, business accounts, etc. The largest part of its loan portfolio consists of short-term (annual) loans financing seasonal inputs especially for tobacco and tea growers. The loans are provided in kind and the TRDB has thus taken upon itself to organize procurement and transport of most inputs to the whole tobacco growing industry, both locally and from abroad.

The cigarette factory in Dar es Salaam has also remained separate from TAT, but in 1975 NDC acquired the last 40% of the shares that had previously remained with the EATCO (UK), so it is now, under its new name the Tanzania Cigarette Co., fully owned by the Tanzanian government through NDC. At the same time the last small imports of cigarettes were banned, mainly to the dismay of a few foreigners and top executives, and of Rothmans (Tanzania), until then the main importer and a subsidiary of Rothmans International which is 75% controlled by the Rembrandt Group of South Africa.

Tobacco growers, TAT and TRDB

Apart from being linked through the TAT extension officers' roles as agricultural supervisors and responsible government officers in general inside the villages, the individual growers, TAT, and TRDB are also linked together in certain annually recurring procedures related to each tobacco growing season.

A minimum of 6 months are required to enable the Bank to process loan applications, tender for the supply of inputs required and arrange transportation of the inputs to production areas, so that these inputs arrive to growers in time for the season in question. This requires that the process
of estimating the farmers requirements starts 9 months before the beginning of the next season.

Before the dissolution of the cooperatives, the committees of the cooperatives assisted by TAT extension agents and in consultation with some of the growers would estimate the input requirements and the amount of loans needed by growers in their area. A general members’ meeting was then convened, in which the proposal to apply for the input loans for the society as a whole was discussed and approved by the members.

However, since 1972/73 for Iringa Region and 1975/76 for other regions tobacco loans are applied for by the villages. The villages' economic and planning committees are now responsible for making estimates of input requirements. The assessments of the tobacco extension officers are usually of decisive importance at this input planning stage.

Ideally estimates of inputs for the coming season should make use of past records. On the basis of past records on actually used input levels some assumptions could be made on the growth envisaged for the next season. The tendency however is to plan future input requirements on the basis of targets worked out under political pressure and based on the officially recommended cultural practices. Pressure is then of course also put on the growers to fulfill these plans, but still the result is very often that large stocks of inputs are kept from one season to the next, wasting the money of the villages (formerly of the cooperatives), that have to cover storage losses and interest on the loans thus carried over.

The bank and TAT have done little to ensure that some elementary procedures are set up to guide the village management in drawing up those estimates. TAT pamphlets and radio programmes emphasize good husbandry practices, but there is very little talk on how the growers in cooperation with the village management should plan their tobacco (and maize) input needs. Observations in the field reveal that the tobacco growers have not yet built up a sense of the importance of proper estimates of their input needs. To a great extent they think this is a problem for the leaders of the village, not realizing that it is their own money, deducted from tobacco sales through the village (cooperative) levy, that is wasted.

The village (cooperative) leadership on the other hand is under pressure from above to produce impressive plans, which often seem more important in the Tanzanian politico-administrative system than actual performance.

That the losses thus incurred by cooperatives and villages can be quite substantial, has been demonstrated in Chunya District, where in the 1973/74, 1974/75 and 1975/76 seasons only 58%, 55%, and 31% respectively of the inputs acquired on credit by the societies were actually required by the growers. If interest and stock losses are estimated at some
10% of the value of the unused inputs these societies lost 1/4 and 9/10 of their total tobacco levy incomes (50 cts./kg.) in the two first seasons, while the loss in the third season would be as high as almost twice the total levy.

In Tabora Region the level of utilization of available inputs has been relatively higher, i.e. 82%, 85%, and 56% in the same three seasons\textsuperscript{10}, but there are some indications that growers were pressed into taking more inputs than they needed in 1974/75 and therefore bore the costs of carrying large individual stocks to the next year.

Prior to the abolition of the cooperatives the growers' input requirements from the various villages were aggregated by the cooperatives societies which forwarded loan applications to Tanzania Rural Development Bank. The abolition of the cooperative societies and cooperative unions now means that villages' loan applications will be placed with TRDB directly before being aggregated on a district or regional level. This presents TRDB regional staff with a formidable task of assessing each village's requirements. The number of tobacco villages in the whole country was well over 600 in 1975/76. Ruvuma Region had 271, Tabora Region 146, and Iringa Region 88 tobacco villages.\textsuperscript{10}

The TRDB on the other hand should be in a better position than the cooperatives to object to politically determined input estimates, since the bank is charged with the responsibility to assess the economic viability of loan applications and suffers the loss when villages are unable to repay loan and interest. This task should also include efforts to educate villagers in their own interest in proper assessment of requirements.

However, perhaps because tobacco production is an ongoing project with a high loan recovery coefficient in major growing areas (except Ruvuma Region), and because of the existence of relatively good extension services through TAT as well as of the fact that sometimes procurement of tobacco inputs by TRDB is done even before receiving loan applications, the process of scrutinizing tobacco inputs loans does not adhere strictly to normal TRDB loan appraisal procedures. Thus this may explain why TRDB is also less strict in ensuring the viability of tobacco production in new areas which are now being opened up, like Handeni and Liwale Districts. It should not, however, be enough for trials and experimentation to prove successful for TRDB to respond positively to requests to finance a crop project.

TAT's perspective about tobacco production expansion may be different from that of TRDB. The aim of TAT is to get as much tobacco output as possible for the lucrative local and foreign markets. Such a consideration would lead TAT to emphasize purely technical potentials of the areas rather than their overall economic potential. The concern of the Bank is that the crop must be sufficiently profitable so as to enable the growers to meet the
cost of input requirements and other related financial costs and still remain with a reasonable level of income for their own use.

It has been suggested as a possible alternative, that TAT might take over the role as TRDB debitor and as distributor of inputs to villages. This would perhaps simplify the procedures, but would also leave growers (and potential growers) even more at the mercy of TAT and its general interests, as well as of individual TAT officers’ specific interests.

TRDB regional offices transmit the loan applications together with their recommendations to the Head Office, where loan memos are prepared by the Operations Department for consideration by either the managements Loans Committee or the Boards Loans Committee. If the loan applications are approved (only in the Ruvuma case in 1974/75 is there a record that TRDB ever refused tobacco input loans) clients are informed through TRDB regional offices. Loan agreement forms are sent out to be signed by clients (village leaders), after which they are returned to TRDB Head Office, where they are signed by the Chairman and Managing Director and the General Manager. Meanwhile tenders will be issued for the supply of the required inputs (to avoid time constraints the Bank actually tenders for inputs in anticipation of the loan applications on the assumption that all these anticipated loan applications will be submitted and approved).

Supplies are procured from those who win the tenders and are landed at Tanga or Dar es Salaam in the case of importation. Input supplies are normally transported by rail because it is cheaper, but where road haulage is involved transporters are selected through tenders. TRDB regional officers are responsible for transport from central stores to villages, which is mainly done by contracting with local, private lorry owners.

The enormous problems posed for a bank by this input procurement and distribution can be gauged by the sheer magnitude of the tonnage of fertilizers handled by TRDB every year. Since 1971 it has grown from 20,000 tons to 48,000 in 1975 of which by far the largest part is for tobacco growers." Since 1972 TRDB has thus catered for more than half the total amount of fertilizers used in the whole country with a tonnage that is more than twice the annual tonnage of tobacco output, which TAT has to deal with. And to this comes the whole range of other necessary inputs, from imported tarpapered paper, insecticides processed in Dar es Salaam's chemical industries, to empty drums for water, produced by local small-scale industry from used oil drums.

No wonder then, that late deliveries of inputs have always marred the tobacco industry. The Tanzania Fertilizer Co., TFC, which has a production and import monopoly, may be behind schedule in production or in ordering from abroad; railway wagons may be in short supply; and locally TRDB
competes for the few lorries available with e.g. the National Milling Corporation which needs them to transport last season's surplus maize harvest at the same time as TRDB must distribute fertilizers for the coming season. Bearing this in mind it does, however, speak in favour of the TRDB and its relatively small staff, that no major supply catastrophe has occurred since the bank went into the business in 1971. But it is also a reminder that it needs only the concurrence of a few unlucky coincidences to cause a breakdown in the fragile supply system, which will not only endanger tobacco production, but also the very subsistence of the people in the tobacco areas, who have increasingly become dependent on maize production based on fertilizer application.

Marketing of the harvested and cured tobacco is the second formal procedure involving TAT and TRDB.

Until 1976 tobacco purchasing by TAT worked in the following manner:

1. A grower brought tobacco to the buying post where it was weighed, valued and the bales indexed showing the grower's name, the identity number of the buying post, and the name of the cooperative society. On average a grower with one hectare of tobacco, planted at the same time, would go to sell tobacco about five to six times from March to July. The early sales are low with a peak in the middle and the last sales are again low.

2. The grower got a credit note showing the different grades of the tobacco and total sales.

3. TAT collected all the tobacco sold on that day from various buying posts. Classifiers at central points then reclassified the tobacco in different grades.

4. Figures were cross checked and verified at TAT regional centres and the exact amount of sales by each cooperative society was computed.

5. TAT then credited the society's National Bank of Commerce (NBC) account with the value of its tobacco sales. The irrevocable letters of authority signed by the cooperative society at the receipt of input loans enabled NBC to effect transfer to TRDB of 75 % of the credited value of sales. This continued until the loan was repaid with interest, after which the society remained with the full payment.

6. The remaining 25 % of the sales value was left by the cooperatives to accumulate for some time before it was taken for distribution to those members who had by then paid up all their debts. In this way societies might have effected 5–6 rounds of payments into members' accounts in the NBC during one season.

The whole procedure was very time consuming, and often, for example, the 75 % deductions continued long after societies had actually fully repaid their loans, because it took time for this information to reach TRDB
headquarters in Dar es Salaam, be ratified there, and returned to the local NBC branch. TRDB then had to refund the excess amounts. Consequently the final payment to growers for tobacco sales finalized in June–July were often not made until half a year later.

In the majority of villages the value of the total tobacco sales has been higher than the value of tobacco inputs utilized. For this reason a 75% deduction on sales ensured almost full recovery of the loans. Problems were encountered in some areas, however, even under this system. There might be inadequate sales due to hail storms, heavy rains, or rain failure. New growers might have problems in the first years, which especially resulted in arrears for the "Tobacco complexes" started after 1971.

In some cases inadequate sales from the villages were due to growers selling their tobacco crop through other cooperatives, which might have less loans or which had already paid back the loans. All this could result in loan arrears despite the 75% deductions. The few societies for which this happened would carry the remaining debt to TRDB over to the following year, adding it to that year’s loan. Those few members who had produced enough to pay their loans, could usually be remunerated for the surplus from the 25% of sales value paid to societies irrespective of loan repayment. If not, societies could draw on the society levy, which was then posted as a balance due to them from the following year's harvest.

Only in Ruvuma Region, where official purchasing of the fire-cured tobacco produced there has to compete with a rather lucrative local market, has recovery of tobacco loans been a general problem.

Recovery was not based on 75% of sales as in other regions. The determination of how much of the tobacco sales should be remitted for loan repayment was made by the management of the cooperative societies. By 1974/75 this had led to such high arrears, that TRDB rejected the loan applications and regional authorities had to finance that year's input credit. After that the system was made the same in Ruvuma as elsewhere, at the same time as the problem was alleviated by a major rise in official producer prices for fire-cured tobacco.

The above mentioned delay in paying the tobacco growers their tobacco money displeased the growers, and in an effort to appease them TAT has opted, starting in the 1977/78 season, to pay cash to the farmers on the spot. These cash payments against tobacco deliveries would be based on 40% of the total value while the remaining 60% would be deducted for loan repayment. The attempt to increase the cash received by the farmer from 25% to 40% was to make farmers' receipts more appealing and prevent their being discouraged. But on-the-spot cash payment offers greater opportunity for those tobacco growers, who are unwilling to repay loans, to
escape doing so by selling their crop through others who happen to have repaid the loans earlier. There is no opportunity to crosscheck growers' sales against their loan position because the time is too short when payment is made on-the-spot. The low level of management of the villages makes it difficult to prepare up-to-date records of the tobacco growers loan positions. There are few tobacco classifiers so they are not able to classify all the tobacco at once when it is bought.

Although it is still too early to make definite judgements, the result of the new system appears to have been large increases in the number and amount of village loan arrears in the 1977/78 season. Some cash payment at delivery is, however, clearly advantageous for the growers, also because it moves the families' low-tide period, moneywise, a couple of months ahead, to fall before tobacco deliveries start. Thus it will no longer coincide with the maize harvest, which has earlier tempted people to sell maize at harvest time, only to be forced to buy at higher prices later. But neither would the answer to the repayment problem seem to be to subject growers to increased administrative control, as that would only be costly and cause conflicts, while most likely growers would still find ways of evading it. Only a new, mutual, social obligation and solidarity within villages, and vis-à-vis external agencies, which may spring from the new village set-up, would thus be a positive basis for eradication of individual repayment defaults.

The accumulated rise in input prices, recently released by reduced subsidization, of course offers the peasants a new incentive to try to avoid or delay credit repayment. Conversely an increase in the net income/costs ratio would reduce the gain from non-repayment, and could be effected either through improved productivity or higher producer prices.

TAT is charged with a vital role in ensuring that productivity of tobacco farming is raised to maintain its profitability in the face of rising input costs. It tries to do that first through intensive promotion of extension services in the tobacco growing areas to ensure that farmers observe recommended husbandry practices. Secondly TAT can help to raise the productivity of tobacco farming through research programmes of:

- a. more effective tobacco curing methods;
- b. improved methods of constructing barns;
- c. some mechanical devices to minimize labour constraints, which is a serious problem affecting productivity of tobacco farming;
- d. the costs and benefits of the present emphasis on quality; and
- e. increased productivity in foodcrop production.

Some research is carried out at its research station in Tumbi, Tabora, but TAT has mainly concentrated on expanding tobacco production by introducing it to as many new areas as possible. While it may be legitimate
from the point of view of equitable distribution of economic activities, for TAT to involve as many people as possible in tobacco production as a means of cash earnings, other considerations should not be overlooked.

The costs involved are very high, both for TAT and other institutions, drawn into putting their resources in projects which are marginal for various reasons.

The spreading of efforts to marginal areas, therefore, affects the producer price which tobacco growers in the whole country get. TAT’s source of income is the difference between the TAT sales price and the price TAT offers to the producer, which is widened when TAT’s marginal costs of promoting production increase. But since the existing producers are already strongly tied in the administrative and economic web of tobacco production they have little choice but to continue producing in order to earn a cash income, even if it is declining.

With its one-sided official purpose, i.e. promotion of tobacco production, and absence of narrow profitability obligations, TAT is, therefore, hardly restricted in its pursuance of organizational self-interests (i.e. continuous expansion in terms of total volume of economic turnover, number of employees, and geographic scope of operations) giving it an ever more powerful position within the whole Tanzanian state controlled economic (and political) system.

Although the government of course has the overriding decisive powers, the more important direct constraint on TAT expansions may well be the other large parastatal involved in tobacco promotion, the TRDB. While the bank’s self-interests as a parastatal organization may be of the same kind as those of TAT, they may still result in mutually conflicting objectives for the two organizations. Thus whereas TAT’s principal interest is quantitative expansion, in volume of production and area, TRDB must be more concerned with the economic results of the individual growers on which its loan and interest recovery, and therefore its own continued existence and growth, is directly dependent.

It is of course difficult empirically to demonstrate the existence of such a contradiction, but it does seem likely to be behind the curiously limited cooperation between the two organizations, their apparent unwillingness to communicate more than absolutely necessary, TAT’s establishment of a cash payment system without considering the resulting loan recovery problems, and the interest of both in making the other shoulder the burden of loan recovery and defaults in relation to villages.
Price Formation and Distribution of Revenue

In a system of peasant commodity production and monopolized bureaucratic control over the circulation sphere, i.e. marketing, distribution, etc., price formation is neither determined on the basis of production prices, nor by supply-demand mechanisms or profit maximization considerations.

On the contrary the price formation process is basically a political struggle over the size and distribution of revenues, which at the national level, for a crop that is partly an export crop, to some degree is conditioned by the obtainable world market prices. That is to say that the producer price of the cured tobacco delivered by the peasants is a residuum of the world market price, the local consumer price of cigarettes, and a range of deductions for other purposes, of which the latter two are both largely politically determined.

Table 25. Reconstruction of sectoral distribution of tobacco revenue 1976 (1975/76 crop season)\textsuperscript{13}

<table>
<thead>
<tr>
<th></th>
<th>Mill. shs.</th>
<th>Mill. shs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growers net incomes\textsuperscript{a}</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Payment to input suppliers\textsuperscript{b}</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Leaf processing\textsuperscript{c}</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Production costs; cigarette manufacturing\textsuperscript{d}</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>140</td>
</tr>
<tr>
<td>Transport, handling, and interest; inputs\textsuperscript{b}</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Transport and handling; leaf tobacco\textsuperscript{e}</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Transport, handling, and selling; cigarettes\textsuperscript{f}</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Cooperatives\textsuperscript{g}</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>TAT administration etc.\textsuperscript{h}</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>TCC administration\textsuperscript{!}</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>TCC profits\textsuperscript{j}</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Sales tax; leaf tobacco\textsuperscript{!}</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Excise and sales tax, cigarettes\textsuperscript{!}</td>
<td>310</td>
<td></td>
</tr>
<tr>
<td>Company tax; TCC\textsuperscript{!}</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>365</td>
</tr>
<tr>
<td>Total revenue</td>
<td>710</td>
<td></td>
</tr>
<tr>
<td>of which from: exports\textsuperscript{!}</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td>local cigarette sales\textsuperscript{!}</td>
<td>450</td>
<td></td>
</tr>
</tbody>
</table>

(Figures do not add up because of rounding to nearest 5 mill. shs. to stress their lack of exactness).
In table 25 the distribution of tobacco revenue between different sectors is presented as rough orders of magnitude.

As in every country the largest part of tobacco revenue is taken directly by the state, for which it accounted for almost 10% of its total recurrent revenue in 1976. Close to 90% of this derived, however, from cigarettes, and was as such only to a small extent dependent on local tobacco production. 85% of government tobacco revenue was charged on cigarette sales alone and might have been obtained even from imported cigarettes.

Without pressure levied by the local manufacturers, the TCC, and behind them the NDC for which TCC is an important asset and major source of income, taxes on cigarette sales could probably have been raised even further, resulting partly in some change in demand structure towards the "traditional" tobacco market which does not demand imported machinery and heavy overhead costs, partly in some reduction in smoking with positive health - and subsequent economic - effects. But at least it should be possible in the future to continue to raise taxes gradually, so as to prevent a rise in demand and expansion of production capacity.

It is worth mentioning though, that TCC's predecessor, BAT, was earlier allowed to run with much higher profits, allowing dividends as high as 20–22% to be paid to shareholders for several years. During the time of joint NDC–EATCO(UK) ownership and EATCO management this was, curiously enough, just about the amount NDC needed to pay interest and instalments on the debt it had incurred by buying its shares from EATCO.

We said above that cigarette production is only to a small extent dependent on local raw tobacco production, but the TCC does benefit from being able to buy locally. The average prices TAT obtains from local sales, i.e. to TCC, are about 20% lower than export prices (see table 26), but since TCC buys the cheaper sorts it probably means that the local manufacturer actually pays the same as foreign buyers, while costs would be considerably higher for imports from abroad. That the cigarette manufacturer and not the leaf producers should profit from this difference is of course a purely political decision.

Conversely the leaf producers do not benefit much from the existence of local cigarette manufacturing, nor from the high government incomes from tobacco. On the contrary sales of leaf tobacco have to finance research, training, extension, and most development programmes in tobacco areas, while usually these items are covered over the government budgets. Evidently this is also to the advantage of the TAT, boosting its 30 mill. shs. "administration" budget.

Table 25 also indicates some important "forward and backward linkages" of tobacco growing. Compared to 90 mill. shs. in growers incomes, it can be
seen that industrial revenue from input supplies, leaf processing and cigarette manufacturing stands at 140 mill. shs., while tobacco contributes an estimated 45 mill. shs. to transport and commerce.

Apart from some input industries these linkages are, however, not of the most "development inducing" type. Some inputs have to be imported, as does all the machinery and spare parts for processing and cigarette manufacturing. Incidentally the cigarette machines are bought from yet another partner in the international tobacco oligarchy, Molins, jointly owned by BAT and the Imperial Group Ltd., both transnational tobacco conglomerates. Cigarette manufacturing is a highly capital intensive industry, internationally second only to oil, and TCC's less than 1000 man labour force must be occupied mainly outside the actual production lines, e.g. in administration and unskilled jobs. Similarly a large part of the 4,500 workers at the two processing plants are low paid, unskilled, seasonal labourers, often women, engaged in grading, etc.

In sum, leaf tobacco alone (leaving cigarettes aside) contributed with only one third of its 300 mill. shs. sales to the incomes of almost 50,000 tobacco growers, and with an important two thirds mainly to government and parastatals in other sectors of society.

Unfortunately we do not have detailed data to show exactly how this sectoral distribution has developed over time, but table 26 gives some indications.

The sales margin includes government taxes, processing fees, transport and handling, and other Tobacco Board or TAT expenses, including input subsidies (but not input costs paid by producers), interest on input credit, and cooperative levies.

For many years the margin was fairly stable, fluctuating mainly with stock changes or handling and processing losses, but in the last three years there has been a clear upward trend. A corresponding tendency can be discerned for the price indexes, developing almost parallel until 1973–74 after which the consumer price index has risen steeply, followed more modestly by tobacco export prices, but with tobacco producer prices lagging behind both. The consumer price index used is for minimum wage earners in Dar es Salaam, but if that is substituted by the National Consumer Price Index (which, however, goes back only to 1970) both consumer and export index stood at 224 in 1977 with 1970 as base year, while the same base would give a tobacco producer price index of 179 only in 1977.

Three coinciding factors lie behind the widening margin between export and producer prices. The first was the prices on imported fertilizers and raw materials for fertilizer production that went rocketing after 1973–74, causing a 3–5 fold increase in local fertilizer prices, most of which was, in the
Table 26. Tobacco Board and TAT leaf tobacco handling 1966–77

<table>
<thead>
<tr>
<th>Year</th>
<th>Produce bought '000 tons</th>
<th>Value mill. shs.</th>
<th>Sales '000 tons</th>
<th>Sales mill. shs.</th>
<th>Producer price index</th>
<th>Export price index</th>
<th>Consumer price index</th>
<th>Sales margin % of total sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e+f</td>
<td>g</td>
<td>h</td>
<td>i</td>
</tr>
<tr>
<td>1966</td>
<td>4.9</td>
<td>19</td>
<td>3.2</td>
<td>1.6</td>
<td>4.8</td>
<td>28</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>1967</td>
<td>7.4</td>
<td>30</td>
<td>4.7</td>
<td>1.8</td>
<td>6.4</td>
<td>40</td>
<td>13</td>
<td>53</td>
</tr>
<tr>
<td>1968</td>
<td>7.0</td>
<td>30</td>
<td>5.0</td>
<td>1.1</td>
<td>6.1</td>
<td>40</td>
<td>7</td>
<td>47</td>
</tr>
<tr>
<td>1969</td>
<td>11.7</td>
<td>48</td>
<td>5.0</td>
<td>1.6</td>
<td>6.6</td>
<td>39</td>
<td>11</td>
<td>50</td>
</tr>
<tr>
<td>1970</td>
<td>11.1</td>
<td>49</td>
<td>7.5</td>
<td>1.7</td>
<td>9.2</td>
<td>60</td>
<td>12</td>
<td>72</td>
</tr>
<tr>
<td>1971</td>
<td>11.9</td>
<td>49</td>
<td>6.6</td>
<td>2.1</td>
<td>8.7</td>
<td>60</td>
<td>16</td>
<td>76</td>
</tr>
<tr>
<td>1972</td>
<td>14.2</td>
<td>70</td>
<td>7.1</td>
<td>3.5</td>
<td>10.6</td>
<td>65</td>
<td>27</td>
<td>92</td>
</tr>
<tr>
<td>1973</td>
<td>13.0</td>
<td>66</td>
<td>7.2</td>
<td>3.6</td>
<td>10.8</td>
<td>68</td>
<td>28</td>
<td>96</td>
</tr>
<tr>
<td>1974</td>
<td>18.2</td>
<td>106</td>
<td>12.0</td>
<td>2.7</td>
<td>14.7</td>
<td>134</td>
<td>25</td>
<td>159</td>
</tr>
<tr>
<td>1975</td>
<td>14.2</td>
<td>96</td>
<td>8.6</td>
<td>3.6</td>
<td>12.2</td>
<td>117</td>
<td>53</td>
<td>170</td>
</tr>
<tr>
<td>1976</td>
<td>19.1</td>
<td>138</td>
<td>15.7</td>
<td>3.0</td>
<td>18.7</td>
<td>262</td>
<td>38</td>
<td>300</td>
</tr>
<tr>
<td>1977</td>
<td>18.3</td>
<td>145</td>
<td>11.7</td>
<td>x</td>
<td>x</td>
<td>209</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
case of tobacco, covered by the subsidy financed from TAT's sales margin. The second was increasing government taxation in the form of a sales tax change in 1975/76 from 7 to 12 1/2 %, which is also levied on all TAT tobacco sales. Finally TAT's own costs have continued to increase, and in the face of stagnating output following hitherto almost uninterrupted growth, this has also contributed to the widening of its sales margin.

Apart from thus being an increasingly important source of revenue for very different sectors of the Tanzanian economy, tobacco also counts as a foreign exchange earner. As such it has more or less constantly increased its proportion of total exports since the first tobacco exports began in the early sixties, and in 1976 it had reached 6.5 %, rating tobacco at the same level among export crops as sisal, cashew nuts, and cloves, with only coffee and cotton far ahead.

The above account of the tobacco economy is but one example among many of export crop production in Tanzania, where a large peasant sector is the productive basis for important segments of the country's small non-agricultural sectors. By exercising a politico-bureaucratic monopoly control over the whole intertwined circulation (and processing)sphere they secure for themselves a major, and increasing, part of total revenue deriving from that crop.

In such a situation it is extremely difficult to discern what are necessary costs of production and services and what are surpluses? Where in this system are these surpluses appropriated, and what are they used for? While it is outside the scope of this study to go into a detailed analysis of these questions, since that would demand a prolonged discussion of the whole Tanzanian social formation, it does seem appropriate to wind up this section with a few propositions regarding this problematic.

Only very minute amounts appear openly as surpluses in the form of profits. The overwhelming part of revenue flows pose as taxes or are couched in cost terms. But the two are actually very much of the same nature, since both are basically politically determined, and some of the taxes may be used for services that are necessary for the tobacco production processes or for the reproduction of the producers, while the "costs" may well exceed what is actually necessary production and reproduction costs.

Taxes as well as parastatal "costs" may therefore contain elements of both necessary costs and surplus appropriation. While it is difficult to strike a precise dividing line, it is clear that surplus appropriated does appear in many different forms: As contributions to the large differences in incomes and social and so-called fringe benefits between peasants and minimum wage earners on the one side and the dominating echelon of top and middle level executives, administrators, and politicians on the other side; as
organizational expansion ("bureaucratic accumulation") which does not contribute to corresponding increases neither in overall productivity nor in the producers standard of living; or as expenses for measures aimed primarily at securing the maintenance of the existing domination system.

As surplus is appropriated primarily in the circulation sphere through monopoly pricing all the way from the direct producers to the consumers, it is hardly possible to distinguish what part of the surpluses appropriated via tobacco is actually produced by the direct producers in the tobacco sector, and what part is contributed by other sectors. In its appearance the surplus thus becomes a truly social surplus.

What has been said above implicitly presupposes a dominating "state class", based on state control over the circulation sphere and most of the "modern", intermediate production sphere. Acceptance of the existence of such a class, sharing some basic common interests, in general contradiction to the peasants and workers classes, does not mean, however, that its nature is as yet fully defined, nor that it is a completely homogeneous class entirely antagonistic to other classes. Tanzania is still in a relatively early phase of this new class formation. There are plenty of conflicting interests within classes, great social mobility, and the situation remains fluid with regard to more or less temporarily coinciding interests and alliances between classes or segments of classes. For example development of the productive forces resulting in diversification of production and increased productivity would seem potentially to benefit everybody – if it can be done in ways that ensure at least some spread of the gains, without endangering crucial socio-economic structures. Finally most groups share (granted to differing degrees) a common national interest in reducing the surplus drained from the country through various mechanisms in the world economy, although they may not agree on the ways to do it.

The International Scene

The operation of the international tobacco market has also been outside the specifics of the present study, but fortunately the UNCTAD secretariat has very recently published a most illustrating study of "Marketing and Distribution of Tobacco". This gives us the opportunity to place the Tanzania material in an international perspective first by citing – rather Extensively – from the "main findings" of the UNCTAD report:

"One of the main findings is that the seven large tobacco corporations or tobacco transnational conglomerates (TTCs) together effectively control each stage from leaf production in both developing and developed countries to the production and distribution of tobacco products on a worldwide scale".

'The study examines the oligopolistic structures and their conglomerate
manifestations in a historical perspective as far as globalization of output, marketing and distribution is concerned. Over time the tobacco oligopolistic structures, now highly product differentiated and self-reinforcing, on a national and global basis, have become more intricately enmeshed with, and geared to, other commodity sectors of the world market.

The cumulative impact of economic concentration and the internationalization of capital has negated, in theory and in practice, the competitive market mechanism. Competition prevailed for only a very short time after the rise of the modern cigarette industry, giving way to a monopolistic phase between 1890 and 1911, and then to the present oligopolistic structures whose behavioural patterns are characterized by demarcation of market frontiers; specific modes of collusive conduct; price leadership and administered prices; and the continued shift in capital ownership from one national group to another.

World dominance of the TTCs and their expansionary upsurge was underpinned by their worldwide capital accumulation process, links with financial capital, mass advertising and the dynamics of cross-subsidization.

"At present, tobacco manufacturing in the developing countries and in the developed market-economy countries is largely dominated by seven large corporations or transnational tobacco conglomerates (TTCs): British American Tobacco, Imperial Tobacco Company, Philip Morris, R.J. Reynolds, Gulf and Western, the Rupert/Rembrandt/Rothmans Group and American Brands. Total sales of the big seven in 1976 were over $32 billion. Adding two lesser transnational tobacco conglomerates – in the Federal Republic of Germany – boosts aggregate sales of the world oligopoly to around $39 billion.

The power of the leading TTCs resides in their control of world cigarette manufacturing (accounting for about nine-tenths of all processed tobacco). Their direct operations account for more than 39 per cent of total world cigarette output. The balance is accounted for to the extent of 11 per cent by other private firms; 17 per cent by state tobacco monopolies in developed market-economy countries; 35 per cent by state tobacco corporations in the socialist countries of Eastern Europe. Because TTCs are increasingly involved in licensing, selling and coproduction relations with other firms, including state monopolies and producers in the socialist countries, the figure of 39 per cent seriously underestimates the market shares of brands subject to their control. The existence of state monopolies is, in itself, no guarantee (notably within the framework of the European Economic Community) that the national market will remain invulnerable to the marketing encroachments of the TTCs, even in the absence of advertising.

TTCs have used their surplus cash flow to build up an intricate network of other activities related, in different ways, to the cigarette-cigarette core of their business. Their resources now cover a whole range of manufacturing, mining, banking, insurance, shipping, communications, services, plantation and agricultural activities. Gulf and Western illustrates this trend toward broadening the scope of transnational activity in the reverse direction: it has diversified into tobacco.

"TTCs, notably BAT and Imperial, also dominate the production of the tobacco sector's specialized capital goods. Machinery required for leaf tobacco processing and manufacturing is dominated by three major transnational firms: Molins, Hauni, and American Machine and Foundry (AMF). Molins, a partially owned corporation of BAT and Imperial Tobacco, is the world's leader."

"Manifestation of oligopolistic power as exemplified in each and every phase of the
tobacco economy indicates that pricing policy is determined not by perfect competition in competitive product and factor markets but by the fiat of administered prices. A seller-determined price is the salient trait of tobacco and cigarette market structures. Accordingly a price theory based on marginal productive theory loses all relevance as an analytical tool. "Although TTCs competition is manifest, it is a specific form of competition only open to oligopolies with massive cash flows, and a competition which erects virtually insurmountable barriers to potential new entrants."

"Global advertising costs of TTCs now amount to some $ 1.8 billion; their sheer magnitude can be gauged by the fact that the cost of launching a new brand has now risen to around $ 40 million. In addition to mass advertising another integral component of world tobacco marketing is global corporate bribery or the "pay-off complex", involving millions of dollars."

"Approximately 85–90 per cent of leaf tobacco that enters into international trade is under the direct or indirect control of about six transnational leaf buyers. Some are TTC subsidiaries; and all are commercially linked with the TTCs much more than with leaf producers."

"In such an economic framework of oligopolistic power, the developing countries are totally at the margin in the marketing decision process. Developing countries supply 55 per cent of world leaf tobacco through foreign oligopsony-controlled marketing channels; their processed exports are almost non-existent; they have no influence whatsoever in the design, output and innovation of machinery; their aggregate receipts from the tobacco industry are based, almost exclusively, on the demand response and marketing decisions determined, in the short, medium and long run, by the TTCs."

The evolution of the political economy of tobacco is not unique. Its historic trends, dominance by a handful of TTCs, and relegation of other economies, in particular the economies of developing countries, to uncertain, dependent activities under the TTCs' hegemony is common to a majority of the 24-odd commodities which dominate non-petroleum exports of the developing countries. Similarly, the TTCs are not unique, but typical in their effective creation of barriers to new entrants; active non-price competition with each other; generation of substantial surplus flows; cross-subsidization into new product lines and the building up of mutual self-reinforcing relations and with other transnational corporations.

The progression of the tobacco transnationals to the privileged status they now enjoy has served to intensify the dependence of the developing countries on two major industrial centres. The bipolar relationships between the developing countries and the TTCs implanted in two industrial centres imply that there are no trade relations between developing countries, save those carried out through the mediation of the tobacco transnationals.

A comprehensive, equitable and dynamic marketing and distribution framework remains to be devised that would permit the developing countries to assume a greater control of the industry. This, however, cannot be achieved exclusively within the framework of the tobacco industry; it must be integrated into more effective policies that would permit the comprehensive global regulation of the transnational corporations."

In the absence of the comprehensive global regulations of the transnational corporations, which the UNCTAD report calls for, Tanzania has done what
Table 27. 
Relative importance of different markets for Tanzania’s tobacco as indicated by the sales of the 1974175 crop.15

<table>
<thead>
<tr>
<th>Country</th>
<th>% of total sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic sales</td>
<td>15.75</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>46.70</td>
</tr>
<tr>
<td>Holland</td>
<td>7.22</td>
</tr>
<tr>
<td>Australia</td>
<td>0.53</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.53</td>
</tr>
<tr>
<td>West Germany</td>
<td>2.20</td>
</tr>
<tr>
<td>Kenya</td>
<td>17.55</td>
</tr>
<tr>
<td>Somalia</td>
<td>0.53</td>
</tr>
<tr>
<td>Mozambique</td>
<td>0.53</td>
</tr>
<tr>
<td>Belgium</td>
<td>7.32</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.78</td>
</tr>
<tr>
<td>Others</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

It could on its own to expel transnational dominance from its own internal tobacco industry. Two successive share take-overs in 1967 and 1974 have brought cigarette manufacturing entirely under Tanzanian parastatal ownership and management and the two leaf processing plants operate under similar conditions. Since 1974 Tanzania produces her own brands and pays no royalties or licensing fees abroad. Cigarette imports were also stopped. But with that the limits of possible retraction from dependency on the oligopoly of the TTCs have been reached. Tanzania still has to import their technology and to sell the major part of her tobacco production in a world market controlled by them. The main importers of Tanzanian tobacco are shown in table 27. Among these the UK market is dominated by the Imperial Group with a 64% market share and with Gallaher, a subsidiary of another TTC, American Brands, as a junior partner holding 26% of the market, while Kenya is 100% BAT territory.20

In the international market Tanzania is an extremely small partner as the value of her tobacco production was less than 1/4% of total world production value and exports did not quite reach 1% of the international leaf tobacco trade valued at 2,100 million $ in 1974.21 This does give the immediate advantage that whatever production expansion Tanzania might plan and achieve it will have no significant effect in itself on market
conditions. But it also means of course that Tanzania holds no bargaining powers in a market controlled by TTCs with annual turnovers of 2–5,000 mill. $ each, nor even in relation to the major leaf buyers among which for example the Universal Leaf Tobacco Co., the worlds largest leaf dealer and processor, has annual tobacco revenues of almost 500 mill. $.

Tanzania's relationship with the Kenyan market is an example of this subjection to the whims of the TTCs. As long as BAT had a stake in the Tanzanian tobacco industry Tanzania had a privileged position on the Kenyan market, where BAT has a cigarette manufacturing monopoly, and BAT maintained that leaf production would be uneconomic in Kenya. When BAT was subsequently eased out of Tanzania they immediately changed their views on tobacco production in Kenya and became deeply involved in tobacco schemes there, with the result that Kenya is rapidly becoming self-sufficient in tobacco and is expected soon to become an exporter, all under BATs auspices.

In more general terms Tanzanian tobacco production is dependent on the overall development of the world market as governed to a large extent by the transnational oligopoly's determination to maintain control, turnovers and very high profits.

Since the Second World War world tobacco consumption and demand has proven almost recession-free, exhibiting an uninterrupted steady growth. During the same period the United States' share of the world export market fell from 40 to about 20%. This has allowed the Third World countries to increase exports rapidly without experiencing corresponding reductions in prices (although "real" prices did go down for most countries). The major reason behind these developments seems to be, that until very recently, tobacco production has remained extremely labour intensive, even in the industrialized countries, making these more and more uncompetitive, despite a range of protectionist measures, vis-à-vis the constantly growing number of Third World peasants who are drawn into tobacco production.

But these trends may not last much longer. In their efforts to reduce costs the TTCs seem to be reaching a breakthrough in new technologies that allows the use of the whole tobacco plant instead of just the leaves in cigarette production. Apart from substituting leaf tobacco with cheap former waste materials it also makes mechanization and automatization of the labour consuming harvest and curing processes possible, which favours enlargement of scale of production and a return of the industrialized countries in the world export market. At the same time anti-smoking campaigns have given cigarette producers a strong incentive to compete in possible ways to reduce the tobacco content in cigarettes and replace it with other materials or even air! Finally some of the main importing markets
must be expected to begin to be satiated resulting in declining import growth rates.  

All of which are tendencies that will hit, not government revenues in the rich world, nor TTCs’ profits, but the Third World producers. And they may well hit hardest at countries that have tried to sever their bonds with the TTCs!

Notes

2. For an account of BAT’s worldwide tobacco interests see Marketing and Distribution of Tobacco. UNCTAD Secretariat. UN 1978, TD/B/C.1/205, pp. 38–41.
4. About BAT, Tanzania, later Tanzania Cigarette Co. (TCC), and Tanzania Tobacco Processing Co., see National Development Corporation (NDC) annual reports 1967–68, 69, 71, 72, and 76. Dar es Salaam.
9. UNCTAD Secretariat, op.cit. p. 51 and Chart A.
10. Information from TRDB records.
12. A couple of years ago a tax increase was actually followed shortly afterwards by a reduction for the cheapest brands, which compete directly with the "traditional" type tobacco, reportedly because of declining sales.
13. a Value to Societies (Table 26) plus inputs subsidy (b, below) less payment to input suppliers, transport etc. of inputs, and cooperatives.
   b Total costs of inputs used have been estimated at 65 mill. shs. Tabora Region used almost 40 mill worth of inputs to produce 60% of the country's flue-cured tobacco output and Ruwuma som 5-6 mill to produce most of the fire-cured output. TAT subsidy is estimated to cover approximately 50% of input costs and stood at 32 mill. Finally input costs between 3 and 4 shs. per kg tobacco produced as estimated by TAT points towards the same total of some 65 mill.shs. Out of this transport and handling is estimated at 10 mill.shs., based on their proportion of total costs of NPK fertilizer delivered in Tabora. Interest is 8.5% p.a., but for some inputs the loan period is shorter, while interest is on the other hand also charged for stocks carried over to the following season, so with an estimated interest slightly below 8% we arrive at 5 mill.shs. Information from TAT and from TRDB records.
14. 13–14 % of total sales value of leaf tobacco derived from TAT information on their approach to calculation of producer prices for the 1976/77 season.
16. 4.5 % of total sales value of leaf tobacco, derived as b.
17. / NDC, op.cit.
18. f Cooperative levy of 50 cts per kg.
19. Information from TAT (for 1976/77, 34 mill. shs.)
20. 112 % of TAT sales value, Table 26.


c Most Tanzanian statistics cover exports outside East Africa only, thus excluding the considerable export to Kenya, which has here been included from a Kenyan source.


J 1996 to 1972: Authors’ estimate, based on local sales quantities and average export values minus 20 %, which is the approximate difference in average values of exports and local sales in the following years, for which we have official figures. 1973 to 1976: Information from TAT Morogoro.

Based on figures in column b divided by corresponding figures in a, not as in many official statistics the guiding average announced before the season. 1966 = 100.

h Based on figures in column e and c. 1966 = 100.


\[ j = \frac{(e + f - b)}{(e + f)} \times 100. \]

Note: c+d is usually smaller than a, as processing in the Morogoro and Songea factories involves a loss in weight of approx. 15 %. Accidental losses also occur as in 1969 when part of the produce bought had to be destroyed due to infestation of some sort. Stock changes may further deflate or inflate the differences.

20. UNCTAD secretariat, op.cit., p. 31.
21. Table 26 above and UNCTAD secretariat, op.cit., p. 96.
CHAPTER X

Theoretical Postscript on Peasants and Modes of Production

The preceding chapters have presented an analysis of the development of Tanzanian peasant production of tobacco for a market dominated by international capital.

We have tried to avoid over theoretic conceptualization throughout the volume, but of course the analysis has been (as it must) informed by an underlying theoretical frame of reference. We also feel that the concrete historical example dealt with here has been able to reinforce that theoretical framework.

Social theories are never absolute in the sense that the last word has been said. Since societies are developing our social theories must be in a continuous process of being developed, questioned, reinterpreted, and refined, with respect to their correctness and relevance for understanding social change and their usefulness in guiding conscious intervention into the course of change.

Without fancying that it sheds full light on many of the topics or answers a lot of the questions, we have tried to locate the present study within the scope of the ongoing debate on peasants and modes of production, which concerns the development of theories of contemporary peasantries.

Peasants, in a broad and ill-defined sense, continue to make up the majority of the population in most under-developed countries. Hitherto, there has been little theoretical concern with the peasant question, and this has probably been a major reason for the incoherence of so-called rural development policies, as well as of much of the analysis and criticism of such policies. We need to clarify the location of peasantries within under-developed societies, their role in the process of development (or under-development), and their internal dynamics. This is not just, as it sometimes seems to be, for the sake of theory itself, but to improve concrete analyses, and to lay bare the strategic political implications of different theoretical tendencies, as well as that of having no explicit theory at all.

The "mode of production debate" attempts to go beyond the empirical, historical study of the various processes through which peasants have been incorporated into the world economy, producing commodities, including
the commodity labour-power’, for the market. It discusses the general characteristics behind the variety of appearances of the relations of production and surplus appropriation from peasants, focussing on the relations between capital and peasant production. The theoretical differences brought out by this debate clearly have important political implications for views on the economic and developmental potential of peasant agriculture, the identification of the class-character and class interests, objective and subjective, of peasantries, and consequently of the types and possibilities of political alliances between the peasantries and other classes/sectors of society.

This cursory introduction to the debate will take for granted the capacity of the capitalist mode to penetrate and establish its domination over other, non-capitalist modes of production, without asking whether this is an in-built necessity for capitalism, and why it should or should not be so. We shall offer an interpretation of the debate, and of the logical structure of the problematique it is concerned with. This will necessarily be more schematic than the differentiated analyses of each of the individual contributors to the debate, and so fall short of doing full justice to them. We shall then conclude by pointing towards a possible convergence of views.

There seems logically to be three possible modes of thinking about the development of peasant agriculture in the epoch of capitalist domination, each of which can be identified in the actual debate:

1. In Search of the Capitalist Farmer. While Marx himself never made any comprehensive analysis of the penetration of capital into agriculture, this earliest marxist tradition does apply his scheme from Capital to agriculture as well. Thus the penetration of agriculture (as well as any other sector) by capital, with establishment of capitalist enterprises; increasing concentration of land and other means of production, polarization between capitalist farmers and landless proletarians; and eventually industrialization of agriculture, is regarded as an inevitable, universal and unidirectional process. The peasantry, therefore, is a purely residual category from earlier pre-capitalist formations, of little interest except in relation to the very process of capitalization and polarization, with its creation of capitalist farmers and a proletariat from among the peasants. Studies within this tradition have had a certain tendency to become empiricist exercises in the use of statistics to "prove" the existence of a polarization among the rural population, rather than analyses of actual historical processes going on.

2. The Peasant as a 'Semi-Proletarian': Capital penetrates agriculture in a process whereby pre-capitalist modes of production are destroyed, but the forms (the household units of production, partly subsistence production) are preserved. Without actually establishing capitalist enterprises in agriculture,
capital's complete dominance over agricultural production is ensured by the combined forces of capitalist supply, marketing, and credit institutions, the state, and the internalization of capitalist commodity circuits in the peasant economy. The relations between capital and peasantry thereby become capitalist relations of production adhering to the laws of motion of the capitalist mode of production. And the peasants are turned into "semi-proletarians", producing surplus value for capital, but located outside the direct labour process. The pre-capitalist mode of production is thus "emptied of its content", and the peasants' income, which appears on the surface to be realized through exchange of commodities, is in reality "a wage in disguise".

3. "The Articulation of Modes of Production": Pre-capitalist modes of production may continue to exist, but are subordinated to capital through a process of "preservation/destruction" or "dissolution/conservation", whereby they are articulated in their diverse relations with capital, particularly through (unequal) exchange relations. As such they remain outside the extended reproduction of the capitalist mode of production, but are forced to contribute to it through a kind of primitive accumulation. The two different concepts "preservation/destruction" and "dissolution/conservation" indicate that, within this line of thinking there are different views as to the more or less transitional character of the peasantry as a pre-capitalist mode of production articulated in a capitalist social formation. Likewise there is no agreement on the degree of autonomy it enjoys.

As already mentioned, the "three lines" have very different political implications – in addition to their theoretical and analytical significance.

Following the first proposition, the peasantry as such is of minor interest and cannot be relied on politically, being a purely transitional element with no clear class allegiance. The analytically, as well as politically, interesting process is the polarization of the peasantry into farmers (kulaks) and workers, who only then become politically important as proper members of the capitalist class and the proletariat respectively.

The second mode of thinking would imply a situation where the peasantry objectively, if not in appearance, is part of the proletariat, sharing its interests in the same direct confrontation with capital, but where the deviant form of the peasants' integration in the capitalist economy may serve to lead to subjective, ideological and political, deviations from this workers'-peasants' unity.

The articulation theories finally do not point to any complete objective unity of interests, as they must define the peasantry as a separate class, both objectively and subjectively, but in most circumstances their shared
subordination under capital might form the basis for worker-peasant class alliances.

If we are interested in the economics and politics of that large part of the Third World population which has survived until today as "peasants" and shows little tendency to dissolve itself in the near future into capitalists and workers, the first mentioned line of thinking does not seem a very fruitful starting point for a general theorization of our problem area, since it defines it almost out of existence. After an initial upsurge in the number of studies looking for "kulaks", for instance in Tanzania and India, in the late sixties, the capitalist farmer has, therefore, also lost prominence in the contemporary debate.

The central argument of the "peasant as semi-proletarian" theories is that, although many pre-capitalist forms are maintained, in reality the peasant sells and is compelled to sell his labour power to, and produce surplus value for, capital, so in essence the income from sales of commodities is "a wage in disguise", which means that the pre-capitalist mode of production is "emptied of its content". To maintain this argument we have to accept that the actual labour process takes place in a petty commodity production form only, that the means of production are only formally owned by the direct producers, that the appropriation of surplus value takes the form of unequal exchange, and that pre-capitalist ideologies continue to linger on although they no longer correspond to the objective economic basis. Although all this together in itself renders the argument problematic, it might still be acceptable if the central concept of "a wage in disguise" seemed useful for the proper understanding of the position of the peasantry in the under-developed countries.

Schematically the essential capitalist relations of production are: capital owning the means of production, buying the labour power of the "free" worker at its value, that is the reproduction costs of labour (the wage), combining these to produce in excess of the value of labour-power and realizing this surplus value in the market, where commodities are exchanged against commodities of equivalent values. The principal law of motion of the capitalist mode of production is the necessity for capital to maintain a continuous extended reproduction, through production and appropriation of surplus value and its accumulation as capital.

But the peasants are not 'liberated" from their means of production, the land; on the contrary they are tied to it, as in most cases there is no way they can secure the simple reproduction of their family labour by selling its labour power. For there are no capitalists, who buy the labour power of the peasants in order to use it to produce surplus value. No surplus value is realized through exchange, at their value, of commodities, owned by the capitalist,
but produced with the labour he supposedly buys from the peasants. On the contrary the very persistence of the peasantry is conditioned, and forced upon it, by its own ability to produce commodities and exchange them below their value (undercapitalist conditions of production) in order to obtain items necessary for simple reproduction.

So there is no labour which is sold and bought at its value, i.e. its reproduction costs, and no surplus value is produced and realized by any capital. The peasant commodities are exchanged in the capitalist market below their value, and the value of the surplus labour is realized as a general increase in the rate of surplus value within the capitalist mode of production, through lower costs of its means of production (raw materials) or of reproduction of labour (consumer goods).

If the exchange value of the peasant produced commodities is still to be considered "a wage in disguise", then the central concept of wage seems "emptied of its content" rather than the pre-capitalist mode of production.

We have already implicitly argued, then, that contemporary peasantries in our opinion should be located within the articulation problematique.

The spread of capitalism to other parts of the world than those social formations where it originally developed, has usually taken the form of developing new social formations dominated by capitalist relations, but where the capitalist mode of production is articulated with pre-capitalist modes to a higher degree than in its countries of origin. This may be explained by the fact that it did not grow out of internal contradictions within the existing pre-capitalist modes of production, but was imposed on these through capital's penetration from the outside.

There are several different ways (incl. different combinations of these) whereby capitalism and precapitalist modes are articulated in these peripheral social formations. The most widespread initial forms were primitive accumulation through trade monopoly by merchant capital combined with various degrees of extra economic power, taxation, etc., ranging all the way to outright robbery; and capital's acquisition of power to extract feudal or semifeudal surpluses. These forms of appropriation of surplus through other means than capitalist relations of production are, however, constantly dependent on employment of direct extra-economic force, which is not the case when the main mechanism of articulation is a generation of commodity production and circulation among both capitalist and non-capitalist producers.

After the initial superimposition of extra-economic forms of surplus extraction on existing social formations the further process has in most cases replaced this with such a generalization of commodity relations, whereby regular use of open force directly in surplus appropriation can be disposed
of (though not of course in the course of class struggles over the size of the surplus and the reproduction of the new social formation as such).

Through the penetration and dissolution, by the capitalist mode of production, of pre-capitalist social formations, earlier community, tribal, feudal, or tributary modes of production have thus been almost invariably transformed into different forms of petty commodity production. Through a variety of colonial economic, political and administrative methods the peasants have been forced to produce commodities for the capitalist market, to obtain items of necessary consumption in the market, and to specialize in a limited range of products, resulting also in the atomization of the single peasant households as economic units, and in the destruction of any original function that earlier communal or feudal forms of surplus absorption may have had.

Some of the essential relations of this petty commodity production are: ownership of the means of production by the direct producers; social division of labour within and between family production units, related to specialization of skills and individualization of whole labour processes towards finished products; and generalization of exchange values, as opposed to barter (or theft) of subjective use values in earlier modes. The principal law of motion is production for acquisition of use values for the simple reproduction of the family production unit – use values which are partly or fully realized through exchange (commodities/commodities or commodities/money/commodities).

The articulation of the petty commodity mode of production with, and its domination by, capitalism means that it is different from petty commodity production in pre-capitalist formations, as the commodities are now exchanged in the capitalist market below their value in a systematic unequal exchange, thus contributing to the rate of surplus value produced within the capitalist mode. So it is not primarily an unequal exchange between countries, but between sectors with different modes of production. This is why it is possible in this connection correctly to talk of unequal exchange of values, and not just of labour time, as it has been pointed out is the case in Emmanuel's unequal exchange theory.\(^4\)

In exchanging their products petty commodity producers are not forced to realize surplus value (as capital is), but are concerned with covering the costs of reproduction of labour and means of production. Therefore the exchange value of their products may fall below the value without forcing them out of production. In the typical peasant situation combining subsistence and commodity production, they may even exchange the commodities below the full reproduction costs of that proportion of their labour, that went into commodity production, since all labour in subsistence
production is necessary labour, contributing to reproduction of the total labour force, while all surplus labour is concentrated in commodity production. This is what is sometimes referred to as subsistence production "subsidizing" commodity production. It would seem incorrect, however, as it has been done, to call this phenomenon "superexploitation" as long as the reproduction of labour is in fact covered by the subsistence production plus the exchange value of the commodities.

"Superexploitation" would take place in the transitional situation where this is not even the case (see below).

This unequal exchange is the logical pre-condition for the survival of a peasantry articulated with capital. The petty commodity mode of production would be open for replacement by capitalist relations of production through penetration of productive capital into the sector, if the exchange value of the product was high enough to cover both reproduction of labour and capital and realization of the normal rate of surplus value. This therefore is the real basis of the "competitiveness" of peasant agriculture, noted already by Kautsky.

That in itself, it must be emphasized, has nothing to do with differences in productivity. The question of productivity does arise, however, in circumstances when technical progress makes it possible for a potentially competing capitalist production to achieve a higher productivity than the peasants. With increasing productivity the value of the commodities (and of labour) decreases, and to survive, the peasants, if they cannot increase their own productivity in the same way, have either to work more, or to accept a depressed level of reproduction. (Again one should not confuse such a setback in the peasants' terms of exchange with a more unequal exchange, as it is caused by a declining value of the commodities, and not by a decrease in their exchange value relative to the value, i.e. it represents a "devalorization" of peasant labour). The difference between the productivity in peasant and in capitalist production, of the same commodity, may become so great, that the peasant has to switch to something else in order to survive. Through such developments the range of products which are produced for the market by peasants become limited, at the same time as still more peasants are drawn into the market economy and, with the subsequent tendency for prices to fall, they have to produce more and more for the market to maintain simple reproduction. So in those sectors where peasant agriculture maintains its competitiveness vis-à-vis capitalist production they may be forced by the supply and demand mechanism to exchange their commodities even further below their value, than necessitated by potential competition from capitalist agriculture alone. And we have seen that they are able to do so as long as they can just maintain
simple reproduction with their combined subsistence and commodity production. For a time, sometimes for a long time, they may in fact be forced to, and be able to, continue production without managing to secure simple reproduction but exhausting the natural and human resources.

We have argued above that the contradiction between peasants and capital is a contradiction between classes within different modes of production, not between antagonistic classes within one mode of production.

For the peasant under pressure from the mechanisms of exploitation, described above, there are two individualistic ways to try to escape: to leave peasant agriculture, or to withdraw to a higher degree into subsistence production, or at least to commodity circuits internal to the petty commodity mode itself. As employment opportunities are usually limited in these social formations the first way is not generally an open possibility, but the growth of the non-agricultural, so-called "informal sector" in many under-developed countries may be seen as a tendency in that direction. The "informal sector" can be a way to exploit the exchange relations between peasants and capital, but it may also assist the peasants in the withdrawal from these by creating internal petty commodity circuits, involving small-scale industry, locally marketed crops, local beer, circumvention of official marketing channels, and smuggling in more or less local trade. Finally there are also examples of peasants simply limiting their cash crop production to concentrate on subsistence crops, and more often of peasant opposition to efforts to get them to expand their cash-crop production.

From the contradiction between capital's interest in keeping peasant producer prices as low as possible, while also keeping the goose that lays the golden eggs alive and growing, stems some of the peculiar rôle of the state and merchant capital in such social formations, i.e. their combined function to draw the peasants into the capitalist market, and keep them there, using a blend of economic and compulsory measures. On the other hand this also gives the state and individual merchant capitals a stake in the surplus appropriated from the peasantry, its size depending on market prices, their degree of monopoly and how much they are able to "squeeze" the peasants. A sufficiently strong monopoly situation may enable state and/or merchant capital to turn most of the peasant surplus labour into their surplus value, thus replacing unequal exchange in the free market and reducing the rate of surplus value accruing through that to capital in general. It is clear from what has been said earlier, that the long-term survival of the peasantry as petty commodity producers must be limited to products, which cannot (yet) technically be produced with a much higher productivity at a higher level of capital accumulation and socialization of labour processes, than individual
peasant households can achieve. While the very survival of the peasantry probably also delays such a development of the productive forces in these sectors, it is unlikely to be more than a delay, as technical progress will sooner or later "spill over" from other sectors, making peasant production un-competitive. In some sectors, however, there may well for a long period exist a transitional situation, where "pure" peasants struggle to survive side by side with different transitional forms.

This is where it seems relevant then, to return to the two first modes of theorizing peasantries, discussed earlier in this chapter, as both of these can be regarded as transitional forms of the dissolution of the petty commodity mode and the disappearance of a peasantry proper. In the first case this happens through an increasing capitalization and concentration of land at the level of the individual enterprise. In the second it is through increasing insertion of productive capital from outside into the whole agricultural sector, with supply of credit-financed means of production to the peasants, infrastructural investments, tight external control over the production processes, virtual expropriation of the products already before they are marketed, and an increasing proportion of the value of the end-product provided for by processing outside the individual farm – a process akin to Chayanov's vertical concentration.\(^7\)

This may seem in the end to bring us back to the beginning, but the important proposition brought forward here is that the most fruitful starting point for a theoretization concerning the peasantries in under-developed countries is the transformation of historically pre-capitalist modes of production into a petty commodity mode articulated with capital, with its own peculiar relations of production and laws of motion. On that basis the transitional forms of its eventual subsequent dissolution can then be analysed as such.

Returning then to the study of peasant tobacco production in Tanzania, we can now conclude by underpinning some few aspects of the analysis, that have profitted from the perspective provided by this theoretical frame of reference.

The integration of the people in Tanzania's present tobacco areas into the world economy has been one extended process, beginning with the last century's caravan work and slave-trade, via migrant labour, till today's expansion of tobacco production on small peasant farms. Each period has marked a new form of expropriation of surplus labour, and a stage in the transformation of the mode of production from tribal subsistence to petty commodity production. All in accordance with the needs of the dominating capitalist mode of production – though not of course in a unidirectional, linear way, but fluctuating with the adaptation of the local communities, the
changing conditions in the world economy, the varying needs of different dominating powers, and the development over time of the social formations involved.

The analysis demonstrates the ongoing character of the expansion of the capitalist world economy, its penetration into and transformation of more or less pre-capitalist modes of production, and its influence on the social formations where these processes are still going on.

Tobacco has not, until very recently at least, been a crop lending itself to easy mechanization or other forms of more productive large-scale farming. For this reason, together with the "competitiveness" and "self-exploitation" of the peasants, it has remained a small farm crop, even in Europe and the US. Here it has, however, been on the decline (despite state subsidization), while expansion has been rapid in underdeveloped countries, where peasant producers have few alternatives but to remain in production even at deteriorating price relations.

Reductions in relative producer prices without subsequent supply problems have been possible because of the continuous process of drawing more peasants into the market economy, more or less monopolized control over the commodity circuits tying the peasants to it, and the "subsidization" of cash crops by the peasants' subsistence production and by depletion of natural resources, such as forests, which are not reproduced in the process.

Tobacco is relatively input intensive and credit demanding, and needs elaborate marketing and processing facilities, the latter of which is also highly capital intensive. Together this has facilitated the establishment of the oligopoly that characterizes the tobacco industry right from the farm gate to the cigarette vending machine or street peddler. In this case, therefore, unequal exchange determined by market forces is to a more than usually large extent replaced by more direct extraction of surplus from the peasant producers through monopoly-price squeezing and various politico-administrative measures. Similarly the surplus is appropriated directly by the various members of the oligopoly, be they states or transnational corporations, rather than benefitting capital in general through low prices.

So tobacco production is a very illustrative example of a form of production that still exhibits many features of petty commodity production articulated with the dominant capitalist mode of production, but which is also moving towards a transitional form, where external forces are intervening in production and labour processes to the extent of dissolving the particular petty commodity relations of production.

The peculiar combination existing in Tanzania for a short period in the early sixties of monopolized commodity circuits and an upsurge of relatively small capitalist enterprises in tobacco production must be seen as an
exception, caused by producer prices and other conditions of production, that were for certain reasons kept especially advantageous for enlargement in the scale of production. But it is also an example of the competitiveness of peasant petty commodity production and its greater ability to survive once more "normal" conditions of production were re-established.

In a long-term perspective the dissolution of petty commodity relations of production, which may well be advanced further by the recent technological breakthroughs in the U.S. industry, seems most likely still to be a prolonged affair, taking the form of further suppression of producer prices, increasing control over production processes and measures to enlarge gradually the scale of certain aspects of production, e.g. through cooperative or "scheme" machine stations, curing barns, and/or provision of seedlings ready for transplanting. The more "social" production and control over production becomes in these ways, the more the direct producers will be forced to depend on their ability to fight collectively for their interests through self-organization, rather than through individual adaptation – just like the industrial proletariat.

Notes

1. Karl Kautsky sets out this classic position in Die Agrarfrage (Stuttgart, 1899), but also offers an explanation of how peasants survive under capitalism and are exploited by it. They 'exploit themselves' earning less from their labour than the agricultural wage-worker. (See J. Banaji "Summary of selected parts of Karl Kautsky's 'The Agrarian Question', Economy and society, 5.1 1976). Lenin provides the most famous example of this approach in The development of capitalism in Russia, 1899 (Collected Works vol. 3, Moscow 1964); for a contemporary example in the debate on India, see Utsa Patnaik "Capitalist development in agriculture", Economic and political weekly, 25 Sept. and 25 Dec. 1971, and "Capitalism in agriculture", Social Scientist, 2 and 3, Sept.–Oct. 1972. In his Draft agrarian programme of social-democracy in the Russian Revolution of 905–07, (Collected works, vol. 1$), Lenin outlined two ways in which capitalism could extend to agriculture: landlords could become capitalists turning peasants into 'allotment-holding wage workers' as in Prussia, or rural capitalists could develop out of free family farmers, as in America, but in either case, the trend towards class differentiation was inexorable. This position was defended by the Bolsheviks against the theories of Chayanov and his school, who argued that the peasantry did not differentiate into opposing classes and that peasant production was governed by quite different principles from capitalist production. (See D. Thorner, B. Kerblay, R.E.F. Smith, ed. A.V. Chayanov on the theory of peasant economy, Hanewood, 1966; M. Lewin, Russian peasants and Soviet power, London, 1968).

2. This line of argument is developed by S. Amin "Le capitalisme et la rente fonciere (la domination du capitalisme sur l'agriculture)" in S. Amin and K. Vergopoulos, La question paysanne et le capitalisme, and in a paper by H. Bernstein, Capital and peasantry in the epoch of imperialism (mimeo, Dar es Salaam 1976). They both quote those sections from Chayanov where he talks about the penetration of capital into agriculture through vertical concentration, rather than the horizontal concentration of earlier Marxist theories. But J. Banaji, "Chayanov, Kautsky, Lenin: considerations towards a synthesis?" places Chayanov closer to the 'articulation' theories mentioned below.
In a later article, "Notes on Capital and Peasantry" in Review of African Political Economy, No. 10, Bernstein's analysis of the development of the relations between capital and peasantry seems to move very much in the direction also presented later in this chapter, but he still stops short of accepting a conceptualization which includes "articulation of modes of production" and the peasantry as a possible separate mode of production. On the contrary it is maintained that the relations between capital/state and peasantry are capitalist relations of production in a variety of different concrete forms, and although Bernstein explicitly withdraws from the advocacy of the theory of the peasant as semi-proletarian he concludes that "it may be inferred that in this way peasants are posed as 'wage-labour equivalents'" (Clarke in Critique of Antropology, No. 8, also Banaji in Capital and Class, No. 3), but in a relative sense that limits the subjugation and real subsumption of household labour by capital to the extent that the producers are not fully expropriated nor dependent for their reproduction on the sale of labour-power through the wage form".


5. Bernstein, op.cit.

6. Ibid.

7. Chayanov, op.cit.
In the World's growing tobacco industry remuneration of the direct producers exerts little influence on the price of the end product. Others have much greater stakes in the world-wide addiction to smoking.

Foremost are the states, whose revenues account for more than 50% of consumer prices, and the oligopoly of giant transnational tobacco conglomerates, reaching from production schemes in many Third World countries to retailing, advertising, packing materials, machinery, and transport.

When such powerful interests are involved – and generally well accommodate with each other – it is hardly surprising that direct producer interests are pushed back into second rank.

Nor is such a situation for tobacco among the raw materials exported from underdeveloped to industrialized countries.

Tobacco does, however, have certain characteristics which makes it, perhaps, an extreme case. The capital intensity of cigarette manufacturing and marketing makes it nigh but impossible for any newcomer to intrude into the international cigarette oligopoly (thus i.a. effectively barring most Third World countries from the export market for the manufactured product). At the other end tobacco production technology has so far allowed small-scale peasant producers to remain competitive with large farms, provided an elaborate marketing, distribution, and credit network is established, almost automatically inviting efforts to monopolize control over the producers, be it by the state or directly by a tobacco transnational.

Such is the setting and the main actors of the present volume, which studies how Tanzania in the last 25–30 years has become a tobacco producer and exporter. But its emphasis is on production, and therefore on the producers. It analyses the processes that – still – make more and more Tanzanians into peasant producers of tobacco for the international market. The dynamics of the organization of production under changing conditions of production. The effects on the development of productive forces, reproduction processes and the standard of living among the producers.

As indicated above the Tanzanian peasants are, however, part of a very definite world-wide scenario, which is also included in the study in order to understand all the different forces and interests that are involved in shaping their conditions of production.