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# The Labour Supply Conditions for the Transformation of Peasant Agriculture in Africa: Lessons from a Malawian Experience

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## ABSTRACT

In implementing rural development projects, African states expect that the otherwise poor peasantry would respond positively by maximising use of the productivity-enhancing technologies available to them, in order to improve their income status. The basic requirement is that the producer must supply significantly higher levels of productive labour-time, mainly from subsistence production and other traditional activities. The Malawi experience suggests that this process revolves around the critical role of both the physical and psychological dimensions of labour-time application. Therefore, the transformation of peasant commodity-surplus producers is unlikely to be effectively achieved, unless attainable commodity income is sufficient to at least support both customary production and subjectively defined socio-economic goals.

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## INTRODUCTION

Labour is an essential factor of production, whether perceived in a quantitative or qualitative sense. This paper attempts to show that in peasant agricultural production, labour supply is a critical issue in achieving a commodity surplus level. To the peasant household, surplus-level production is obviously necessary, as it is in this way that the household can attain the cash income it would need to improve its socio-economic status above meeting subsistence requirements. At the outset, two questions may be asked: how can the desired commodity surplus be achieved, and why is it that the peasantry is often not able to achieve it?

Generally, it can be argued that peasants face a host of constraints, of an environmental, technical and economic nature, that together limit their ability to achieve a level of production which could improve their physical and economic status. But the authorities often perceive an additional production constraint. This is contained in the traditional set-up, which limits the development of perceptions of rational production behaviour towards higher surplus production. Thus, African states have implemented rural development projects with the aim of breaking the vicious circle of low production and low income among the peasantry. These projects have focused on three major elements of the transformation of peasant agriculture: improvement of knowledge of production, improvement of access to higher yielding agricultural inputs, and improvement of production behaviour. The last implies that if the needs of commodity production are to be effectively met, there must be a significant change in the structure and level of supply of productive labour-time, away from the traditional pattern of life and production. This is the focus of analysis in this paper.

The point of departure for the transformation of the peasantry into commodity-surplus producers is the idea that both the state and the producers must meet on a common ground. The state on its part, must provide the range of production facilities that would help to effectively remove the technical constraints the peasants face in achieving the desired production levels. The peasantry, on their part, must be able to perceive the benefits of maximising the available inputs to achieve the desired level of production. This consists of supplying the required quantity and quality of labour. What remains, therefore, is the significance of the specific dynamics of interaction of the two situations, as they occur in a specific context of production, shown in the form of particular producer responses. In analysing the dynamics of these processes in the context of a Malawian project, the paper seeks to demonstrate how, in practice, the potential benefits of the project are unlikely to be maximised by both parties – the peasant producer and the state. This is simply because as the state is often more likely to pass a greater part of an increase in the cost of production onto the producer, the latter is likely to respond by withdrawing from production. The paper attempts to show both how the context of peasant production decisions have been defined and how producers have exercised their relative production freedom in commodity production.

## **AIMS OF RURAL DEVELOPMENT PROGRAMMES**

For a newly independent country in Africa, rural development has been considered the most realistic and feasible basis for simultaneously effecting the desired rapid rate of national economic progress and the most immediate

improvement in rural socio-economic welfare. It is simple to understand this. For most of these poor and not yet industrialised countries, agriculture is the natural economic activity of the mainly rural-based, subsistence population. Furthermore, improvement in peasant agriculture is probably much less demanding of the national financial and human resources than is the case with industrialisation efforts. This means, therefore, that during the initial stages of an economic development endeavour, much of the national production would have to come from the efforts of the rural subsistence population.

Malawi exemplifies this situation very well. At independence in 1964, the government was faced with the stark reality of having to rely not only on agriculture generally, but particularly on peasant agriculture. The country did not have known mineral development potential, and the share of private commercial agriculture had shrunk from 16 per cent of the total land area in 1900 to just below 3 per cent (Pachai, 1978, quoted in Simukonda, 1986: 54, 55), while about 95 per cent of the population was still rural, subsistence-based, and contributing significantly both to the marketed output and export earnings. Agricultural products contributed over 90 per cent to such production (MG, *Economic Report: 1964 to 1971*). Nevertheless, there were significant constraints faced by peasant agriculture, but which, *inter alia*, implied that it had significant potential for improvement.

Within the above context, government immediately embarked on a conscious policy of developing peasant agriculture, by providing more agricultural extension services and reorganising production. This was done in the context of rural development projects (RDPs) and specific crop schemes. The latter were administered either separately or as part of the RDPs. Although general agricultural extension services had been provided since the colonial period, particularly since the 1940s, the concept of an area-bound *development scheme* involving intensified agricultural services was adopted in 1966. But this soon (1967) came to be (partly) replaced by a programme of *integrated rural development projects* (IRDPs). There were four regional projects under the latter concept, implemented between 1968 and 1972<sup>1</sup>. This approach had the advantage of both covering a much larger geographic area and involving development of basic infrastructure related to comprehensive regional development. Nevertheless, the four projects were still limited in relation to the national peasant population. Accordingly, in 1977, government decided to extend the benefits of their relative success to the rest of the rural population, this time under the concept of the *National Rural Development Programme* (NRDP). The NRDP concept involved reorganising two or more integrated rural development projects under an Agricultural Development Division (MG, 1978: 29).

### **Official perceptions about the production behaviour of peasants**

By its “rural development approach” the Malawi Government apparently viewed mere intensity of agricultural extension as providing an insufficient basis for effecting the desired improvement in peasant production. It also saw a change in peasant production behaviour as necessary for achieving the desired improvement in production. Such change would facilitate rational provision by the state of a host of necessary agricultural services. As the government also considered its intervention in peasant agriculture a form of primary development investment, a production framework that ensured peasant producers’ compliance with official goals would provide a better basis for ensuring that such investment in the technical, financial and material aspects of production achieved the desired maximum results. Such a framework centred round the basic idea that along with improving the technical aspects of production, producers needed to be effectively controlled with respect to their production behaviour.

Implementation of integrated rural development projects (IRDPs) involved several service components pertaining to a more comprehensive scope of regional development. It commenced with land survey and development (including irrigation works in some cases), and land demarcation and allocation to producers. The production process involved provision of agricultural extension, yield augmenting inputs (seeds, fertilisers and pesticides) as well as (in selected aspects) farm implements. To ensure that all producers had access to these inputs, an official agricultural credit facility was provided. Associated services included construction of access roads, provision of produce markets, and health facilities (clinics and preventive services). Furthermore, there were two distinctive features. One was new land tenure arrangements. The other was the setting up of a specific institution to manage the programme, on a semi-autonomous basis. It is, therefore, clear from this rather complex institutional arrangement that implementation of the IRDPs involved considerable (public investment) costs, which gave rise to measures aimed at controlling the peasants’ production behaviour in the attempt to ensure that the programme would achieve planned production targets.

The land tenure issue seems to have been central to official perceptions about production relations. Peasant agriculture is in essence customarily land-based. As such, the relatively low productivity and production characteristics of peasant agriculture are usually perceived to emanate from the rather poor and uneconomic land use practices, in turn derived from the type of land holding system (see e.g. Gershenberg, 1971: 54). Thus, a major aim of Malawi’s IRDPs was to remove perceived poor peasant performance, arising from rather “careless, uneconomic and wasteful” practices. According to the views held by officials (at least during the earlier stages of the country’s development), such

negative agricultural practices mainly derive from the widespread traditional perception that “land belongs to no one in particular”, but is “held in common”. At least this is what State President Kamuzu Banda said when introducing the Malawi Land Bill of 1965 (*Hansard*, 12 April 1965) and the Customary Land (Development) Bill of 1967 (*Hansard*, 4 April 1967). Therefore, RDPs must have been seen as offering the most effective framework for controlling the peasantry in their agricultural labour supply and application decisions. This could be accomplished through a combination of land tenure change, away from the traditional system, and strict supervision of production. Within this context, it appears that state intentions of controlling peasant producers derive from at least two other closely related ideas. One is the perception that much higher levels of labour-time are indeed required for the new style of production, which is directed at achieving surplus levels of production. The other is the fear that the peasant producer would normally be reluctant to meet these higher labour-time requirements. This is particularly so in the short-term period, when the producer may not yet fully appreciate the need to radically transform into an economic producer, given certain production conditions. An example of such labour-intensive new style of farming system is the Karonga Rural Development Project.

### **THE RURAL DEVELOPMENT PROJECT CONTEXT: THE KARONGA MODEL**

The Karonga Rural Development Project (KRDP) represents a context in which the new farming system is introduced in a geographically defined region. KRDP was launched in 1972, as the last of the four regional projects under the initial *integrated* rural development programme. It involved implementation of a series of crop development schemes, scattered across the defined region. Each agricultural *scheme* either focused on a single crop, or involved two or more crops, depending on the specific soil conditions to which they were suited. Only four crops (rice, maize, groundnuts and cotton) were officially chosen for the project, on account of their commercial value. They were grown in rain-fed conditions, except rice which was grown under irrigation. It is significant to note that the peasantry were already cultivating all these crops to commodity levels in this lakeshore region of extremely high agricultural potential (see e.g. MG, 1970: 1). What was new, however, and had significant implications for social change, were both the introduction of new hybrid strains of these crops and the method of organising production. Before KRDP, agricultural production was undertaken on traditional land holdings. By virtue of the KRDP programme, the production of the selected crops came to be undertaken in almost purely commercial terms. And in order to support the achievement of the project’s aims, production was organised within the framework of a cultivation *scheme*,

which consisted of three main categories. One was double-cropped irrigated rice in three subschemes<sup>2</sup>. The second was single-cropped rice production on inundated/rain-fed land. The third was cotton, groundnuts and maize production on drier land. By the completion of the development phase, the total amount of land under such schemes was some 23 840 acres, in the respective proportions of 10.5, 43.1 and 46.4 per cent. (KRDP, 1978; WB, 1978: Summarised in Simukonda, 1986: Table 4.1: 188).

There are four main issues of the *Karonga Model* which had significant implications for commodity labour supply. First, the “scheme approach” implied an intensification of labour-time and externally induced differentiation of the peasant population of the region. Secondly, the different scheme types were associated with different degrees of labour-time demand as well as differences in cash earning potential, arising from a combination of productivity and producer price. Thirdly, the schemes were simply contiguous pieces of land, normally no more than 560 acres, carved out of village agricultural land, and comprising demarcated family allotments ranging from two to four acres. These pieces of land were officially declared “special areas” under state control, distinguished from traditional land, and were meant for the cultivation of selected cash crops. Lastly, in terms of both overall size and the number of demarcated holdings in each village scheme, such schemes could accommodate only a portion of the village population. Both the scheme farmers and the rest of the peasant population continued to hold their traditional village holdings for subsistence and other cash production purposes.

The Karonga model is, however, not so typical of Malawi’s rural development approach outside the irrigated schemes. The common approach is one where there is no separation between cash crop and subsistence production, in terms of the legal status of the land held and used. Instead, use is made of some form of crop rotation, on demarcated rectangular family allotments. Perhaps the government saw the Karonga model as an alternative experiment to achieve the highest possible desired results. Presumably this was perceived to be arising from stressing cash crop production, attempting to match crop types to soil properties, and ensuring that only the most suitable (i.e. able and willing) producers were involved by careful selection. It might also have been an attempt at providing a clearer basis for measuring and evaluating the programme’s success. The idea of farmer selection has at least two further implications. On the one hand, it is possible that officials feared that the expected higher commodity labour-time demands might fail to generate the required sustained higher levels of labour supply response from the producers. Therefore, only by having a farming framework in which the farmers could be *compelled* to comply with the standards of production, would the desired response be forthcoming. On the other hand, the officials appeared less concerned with the objective of

directly improving the income welfare of the region's peasant population as a whole, than with ensuring that the programme did achieve the perceived level of production success. Such success was calculated on the basis of individual performance (Simukonda, 1994: 293-6).

### Farmer status differences by scheme types

Two main issues defined the differences amongst the scheme types with respect to their commodity labour-time demands. One was the absolute labour-time required for the production of a particular crop type. The other was the degree to which scheme officials enforced production standards. The latter was apparently necessitated by the capital (investment) ratio or internal rate of return on capital. That is, the amount that the state expended on the development and maintenance of the scheme, relative to the value of the crop produced by the farmers. The other was the relative sensitivity of enforcing production targets, through strict adherence to standard procedures. In this case, the double-cropped rice irrigation scheme required the highest level of enforcement of farmer production behaviour. This is simply because it required more strict adherence to the production calendar and agricultural input use, in a relatively higher technical context. On the one hand, farmers had to strictly follow the planned production calendar in order to meet the requirements of two croppings in a year. On the other, the highly technical nature of double-cropped irrigated production required a large presence of technical and extension personnel, to supervise the operations and promptly deal with any problem of water supply to irrigation canals. Such official presence, together with the high cost of the development of the irrigation works, implies higher administrative cost, that must be made good by the resultant value of the crop. In addition, as the double-cropping system involved continuous year-round cropping activity, officials might perceive that farmers decided to relax or take "unauthorised leave". This would have a serious negative effect both on performance by the neighbouring plot-holders and the scheme's overall ability to achieve its planned production targets. The effect of this was that the state had almost complete authority in assessing the performance of peasant households for the purpose of deciding their eligibility for membership of the farming scheme.

In contrast, production in the other two scheme types involved significantly lower technical and administrative costs. As they were rain-dependent and involved single-cropping, their physical development and production management were largely left to the farmers themselves, who were also organised into land allocation committees for that purpose. As such, the scheme came to be viewed as virtually traditional land, with respect to landholding status. All this was even more so in the case of the *dryland crops* scheme type.

## COMMODITY LABOUR-TIME IMPLICATIONS

Generally, what appears to be most significant about the application of labour-time is the degree of independent decision-making enjoyed by the scheme farmers. The starting point of analysis is that the peasant household needs to carry out commodity production in order to meet its defined income needs. In order to do so, it needs adequate external (state) agricultural support services, which are of three basic categories. These comprise land on which to carry out the production, such agricultural inputs as seeds, fertilisers, chemicals and farming tools, for which a credit facility may be necessary, and extension services for proper knowledge of production. In this context, the maximum level of independent decision-making is defined by a situation where the producer simply responds by achieving the highest level of production consistent with the defined income needs and the technical limitation of production facilities. The opposite of this is where state agents have to put in place, and strictly enforce, production standards to ensure that the producer does indeed follow them.

Enforcement of production standards arises because of the complex realities of the production system itself. It suggests that there is a need to match the state aims of production with the producers' own needs, desires, behaviour and production capacity. The experience with the Hara Irrigated Rice Scheme might shed light on the matter.

### The Hara Rice Scheme

The Malawi Government launched the Hara irrigation scheme 1967, with the aim of radically increasing rice production above what had so far been achievable under traditional methods of production. With irrigation, both productivity and overall production were to be sharply increased through the use of hybrid, quick-maturing seed varieties, which allowed double-cropping in a calendar year. In addition, the 560-acre land that was developed, was much larger than what had previously been cultivated for rice production. This permitted bringing in additional producers from more distant areas, including from outside the natural catchment area<sup>3</sup>.

It is significant to note, from a labour supply viewpoint, that rice, along with groundnuts, was produced mainly as a cash crop. Otherwise, cassava was the staple crop, and there were also a number of minor crops grown primarily for food or for sale. These included maize which together with rice supplemented the staple crop, millet cultivated on the hilly parts of the Hara flood valley, pulses, sugar cane, bananas and other fruits and vegetables. Cattle were the main part of livestock farming, and fishing on nearby Lake Malawi was the main protein source. Finally, agricultural activity was mainly seasonal: it was



largely confined to the seven-months rainy season (summer), while during the dry season (winter) time was largely spent on leisure and social responsibilities.

When the Hara scheme was introduced, the idea was that it would be the major source of agricultural incomes, due to its sheer income-yielding superiority. But whether or not it was also intended to supplant other cash-based agricultural activities (e.g. rain-fed rice and groundnuts production) is not clear. Nevertheless, at least from the point of view of practical realities, it was not expected that those engaged there would need to have the time to cultivate other crops as well. Based on planning statistics, the gross annual income from a double-cropped two-acre allotment in the scheme was to be significantly higher than the average amount derived from the same amount of land within the traditional sector. Compared to rain-fed rice, groundnuts, maize and cotton, the maximum irrigated rice income was to be as much as 2.6, 8.6, 8.4 and 6.8 times, respectively. Such a significant possible income improvement was enough to attract the peasantry into enlisting for the commodity scheme. However, this was to be at the cost of much higher levels of labour-time. For instance, the farmer shifting from rain-fed rice, groundnuts or cotton would expect to increase labour-time by as much as, respectively, 2.6, 2.3, 3.9 and 2.3 times (KRDP, 1978: 57-60; Simukonda, 1986: Table 4.4: 190)<sup>4</sup>. More significant is the fact that the scheme allotments were additional, rather than alternative, to the land held under traditional cultivation. The reasoning was simply that scheme households would still find it necessary to continue with customary production. At least, it is in this way that they would meet their subsistence requirements. How far this simultaneous production arrangement could serve the interests of scheme commodity production is not obvious. On the one hand, it could help reduce the pressure to retain part of the scheme rice output for consumption purposes. On the other hand, the greatly increased pressure on the supply of household productive labour-time could seriously undermine the efforts to meet the full labour-time requirements on the scheme allotment.

The question then arises: just where would this required additional labour-time come from? Looking at the traditional pattern of life, the main productive activities outside agricultural production included fishing and livestock (for men and male children), house construction and repair, and a host of food procurement and processing activities. Then there are activities of a social nature, such as attending funerals and to attend to the sick and visitors, or visiting relatives and friends. The rest of the time may be spent on leisure pursuits and resting (MG, 1972: 5). How dispensable some of these activities may be considered, compared to the labour-time required for scheme rice production, depends on the extent to which they are held as a cherished norm or social obligation, or for reasons of personal preference. In the context of socio-economic development, however, officials may take the view that many of these

activities are pursued simply because there is time available to do so, and that this is so because there is no more profitable alternative to substitute for them. Such a view remains to be tested against experience, and experience with commodity production in the Hara area provides the necessary basis.

## **LABOUR-TIME ALLOCATION IN THE HARA SCHEME**

The scheme commenced in 1968 with an “experimental” group of about 80 household farmers, that included those who had been cultivating rice on the land taken over for the scheme. A year later, the government extended an invitation to the rest of the population to participate in the scheme. There was an expected rush for scheme plots, enthusiasm having been generated by an intensive official publicity about the income superiority of the scheme’s operations. Consequently, by 1970 (the second year of operation), the planned 500-acre scheme was over-subscribed by about 64 holdings. This was made possible simply by permitting the extra farmers to develop plots on their own initiative. It would take place under official supervision on land adjacent to the scheme, in the hope that the farmers would receive scheme canal water supply. In effect, the area of the scheme was officially expanded to accommodate them.

### **Initial response**

The apparent enthusiasm by farmers to participate in the commodity scheme was, however, severely restrained by the sheer physical drudgery involved in developing the land into plots. The plots had to be sufficiently level to hold water evenly, and the farmers had to construct water canals leading to their plots. The first result was that most farmers were not able to complete development work on their allotments in time for the planting stage, as determined by the production calendar. In some cases, floods damaged allotments which had been prepared or planted, and work had to be redone.

Within the above context, farmers soon realised that they were spending so much time on their scheme operations, that they had neither the time nor the energy left for anything else, to meet their subsistence production and other domestic requirements. This was a serious dilemma. If they were to secure their scheme membership, they had to continue attending to their scheme allotments to a satisfactory extent<sup>5</sup>. While this would assure the eventual realisation of their income objective as per official plan targets, it also seriously detracted from their ability to meet the full requirements of domestic production and other necessary activities. In other words, scheme rules were such as to seriously limit the producers’ freedom to decide on a desirable and necessary balance in the allocation of labour-time between the two categories of production. Although

scheme officials allowed households to retain part of their rice harvest for their own food requirements, this was considered inadequate compensation for the loss of staple crop production. And scheme commodity production was certainly no substitute for livestock production, for instance, as the latter was to a significant extent socially determined. Within this context, scheme farmers found it necessary to split the household, having some members attend to domestic requirements, allocating chores on the basis of gender and age. Thus, adult male members did most of the land preparation and fertilisation work in both sectors, while women and children did most of the planting, and male children attended to the livestock. But as this tended to slow down progress on the scheme allotment, the next solution was to hire the required additional labour-power, for both sectors of production. However, employing hired labour required the farmer earn some commodity income first. Fortunately most labourers accepted payment at harvest time. As a result, during the first two years, about 90 per cent of the scheme farmers employed hired labour, on a more or less permanent basis. Many also hired work oxen for tilling and levelling the allotment. Hired labour contributed, on average, about 23 per cent of all the labour-time spent on work of a clearly productive kind (e.g. crop production, livestock, and construction and repair work). The major part of this was applied to non-scheme operations. For instance, 47 per cent of it was spent on cassava production, as against 27 per cent on scheme rice production (MG, 1972: tables 11-12).

The above situation did not necessarily mean that scheme farmers were able to fully utilise their allotments. By the end of the scheme development phase in 1970, only about 76 per cent of the scheme's capacity was adequately utilised. But the farmers themselves were able to utilise, on average, only about 55 per cent of their allotments (67 per cent for the summer and 45 per cent for the winter crop). About 20 per cent of the rest was attributed to plot-borrowers (MG, 1972: 6).

What explains the above allotment utilisation situation is a combination of several factors. First, plot-borrowers were those members of the immediate community who either had failed to gain scheme membership, or who did not wish to be permanently committed to its commodity requirements through such membership. Plot-borrowing, therefore, gave them an intermediate chance of benefiting from the scheme's superior crop productivity, in order to realise the rice needed for consumption. The scheme farmers, on their part, may have felt a moral obligation to assist relatives or friends who were not so fortunate as to gain scheme membership, by sharing the privilege to an extent. Nevertheless, the more compelling reason is that they actually needed extra labour-time in order to utilise the allotment at a higher level, and thus to avoid official disciplinary action against them. Finally, such private social arrangements tended to serve the interests of the scheme authorities very well. They needed to

see that the scheme's utilisation was maintained at a high level, to achieve a justifiable level of performance. Furthermore, it would not be in their interest to have to evict farmers for failing to achieve and maintain an acceptable level of production performance. Thus, plot-lending was seen in the context of "mutual assistance", which was in the end beneficial to everyone concerned.

Differential seasonal performance suggests the existence of a significant behavioural phenomenon. This is simply that expected performance would have been higher in winter than in summer. Winter is when agricultural activities within the traditional sector are at a minimum. Therefore, there is a strong possibility that scheme farmers found it difficult to adjust to the new pattern of labour-time allocation demanded by double-cropping. It suggests that scheme farmers sought to continue to pursue the traditional pattern of social and domestic activities, as well as to enjoy leisure-time and rest, which are more permissible during the dry (winter) season. Thus, it was at this time that they needed and encouraged plot-borrowing labour-time more. They knew that this extra labour-time was more forthcoming during this period, which was outside the necessary agricultural production activity. Rather unfortunately, however, scheme farmers tended to overestimate their ability to mobilise such labour-time, as they themselves sought to allocate too much labour-time to domestic and social activities.

### **Longer-term responses**

Soon after 1970, the respective summer/winter performances were however reversed, almost permanently. But overall average performance on the allotment did not improve. In fact, it gradually declined. The average allotment fell from 2.3 to 1.23 acres between 1970 and 1984, while the planted portion at these levels declined from 66.4 to 55 per cent by 1983 (KRDP, 1983: Table 2; 1978: Appendix 5). This performance is inclusive of the plot-borrowers' contribution. The pertinent question is: why did overall performance fall when it ought to have improved with successful adjustment to the new labour-time allocation pattern and the employment of hired labour-time?

The starting point was that scheme farmers began to use less and less hired labour-time and to replace it with household labour-time. But apparently they were not quite successful in the latter case. At the same time, they gradually reduced household labour-time, and in extreme cases, some completely withdrew from the scheme, whether by voluntary or official disciplinary action. In the latter context, the scheme lost members every year, averaging 22 members (or 6.3 per cent of existing members) between 1970 and 1983. Meanwhile, scheme membership grew, and by 1984 it had grown by almost 75 per cent to 457 farmers. Such growth in membership was a result of the scheme

authorities admitting more farmers than required to simply replace those who had left. Some of these came to take up portions of allotments given up by existing farmers, either by choice or official disciplinary action. Available statistics also suggest that farmers grew increasingly reluctant to directly prepare their allotments for planting themselves (by hand-hoe), in preference to labour saving devices (work oxen and mechanical tillers). For instance, between 1979 and 1980 work prepared by hand-hoe only averaged 14 per cent. The rest was prepared by means of work oxen, which were often hired. When mechanical tillers/levellers were introduced in 1981, work prepared by hand fell to 6 per cent, then to 5 per cent in 1982. At the same time, the proportion of the work prepared by work-oxen fell from 68 to 58 per cent (KRDP, 1983: Table 1). It is possible, therefore, that if there had been sufficient work-oxen and mechanical tiller capacity, all the land preparation work would have been done by such means.

The above levels and developments in labour-time allocation suggest the following situations. First, farmers were unable to meet the labour requirements of scheme production because they could not mobilise enough labour-time from within the household itself. This was partly because they needed to carry out subsistence and other domestic operations at the same time, and partly because they found it difficult to give up completely some of the less indispensable activities they had been accustomed to. Secondly, farmers felt compelled to employ hired labour and, later, mechanical devices too. Not only was this help needed to supplement household labour-time, but it also helped to save human energy and time, which increased efficiency. However, the farmers were unable or unwilling to employ these to the extent that would have allowed them to achieve full-level production on the scheme allotment. And finally, in spite of both this and the apparently adequate adjustment to the new seasonal pattern of labour allocation, farmers grew increasingly averse to the physically demanding work of scheme commodity production. This is gauged from the continuous withdrawal of farmers from scheme commodity relations, either by leaving the scheme or by reducing allotment utilisation levels. What would explain this phenomenon?

## ANALYSIS OF COMMODITY-RELATED RESPONSES

At the outset, the labour-time supply problem seems to be rooted in two major phenomena: the level of *income*, and the *drudgery* of work – whether perceived in a physical or psychological context. To these could be added the absolute *scarcity of labour-time*.

### The income factor

An analysis of the peasant commodity responses, as related to hired labour-time, may be built on two main interrelated premises. On the one hand, hired labour can only be supported on the *income proceeds* from the crop which it helps to produce. And from a qualitative (psychological) viewpoint, on the other hand, the idea is that the farmer will want to remain in the scheme only if he is able to realise a "satisfactory" level of income. In terms of simple calculation, therefore, the commodity farmer would see himself as justified to maintain hired labour if the commodity value of the hired labour's contribution were higher than what the farmer has to pay for it. The exception appears to be where a greater value is placed on the simple ability to maintain commodity operations. This could be defined either in the social context or in the context of longer-term objectives relating to future production plans.

The above conceptual framework suggests, in the first instance, that hiring labour-power within the peasant economy is very sensitive to the *income level*. In other words, the peasant farmer would normally not resort to the use of hired labour, unless it is really helpful or absolutely necessary to do so. The purpose might be to raise the net income level, or to help secure the privilege of remaining in the production system. In the event, trends in the use of hired labour-time in the Hara scheme are consistent with this hypothetical framework, particularly as they relate to trends in *expected* income levels.

During the initial stages, when almost all scheme farmers hired labour-time on a more or less full-time basis, this happened in mainly two ways. First, as plot development work was quite demanding in labour effort, farmers felt compelled to complete the work in time for the fixed planting stage in order to immediately start realising their income. Secondly, farmers most probably wished to demonstrate (to the scheme authorities) that they were indeed capable of accomplishing the work expected of them at selection time. This necessity was also brought about by the farmers' inability (if not simply unwillingness) to sufficiently adjust to the new labour-time allocation pattern demanded by irrigation production. However, the hiring of labour was also made possible by the fact that at the prevailing producer price - input cost level, the farmer was able to realise a satisfactory income margin. But then, why did farmers (on average) not employ more hired labour to maximise income from a fuller allotment utilisation at this early stage?

The most likely explanation is that the farmers must have perceived the possibility of being able to mobilise sufficient additional labour-time from within the household. If so, they could maximise income by avoiding the "luxury" of having costly hired labour work for them. Some simple calculations

may demonstrate this. At 1970 prices, the farmer could expect to achieve a maximum rice output value of K360 (Malawi Kwacha), based on the standard allotment size of 2 acres, double-cropped, at the planned maximum yield level. After the compulsory input package (10 per cent of gross value) and the wages paid to one labourer (23 per cent), net earnings would be K241 (or 67 per cent of gross output value)<sup>6</sup>. Since evidence shows that with one labourer the farmer was unable to utilise the whole allotment, he would probably need to employ at least two labourers. In that case, his net earnings would be reduced to only 44% of the value of the crop. It appears that for the peasant commodity producer, it might not be necessary to accept so large a reduction in the income earned, particularly as the farmer would be paying for hired labour-time more than he would retain (i.e. K166 in wages as against K158 retained), just for the "luxury" of continuing to enjoy some leisure that he was accustomed to.

From available evidence (MG, 1972: Table 10), the actual situation was that a scheme household spent about 38 per cent of the total available labour-hours (about 4 170 hours) "doing nothing" of productive nature. Meanwhile, hired labour contributed about 22.6 per cent (1 507 hours) of the total productive labour-time. If the household were to convert the unproductive labour-time in productive work, all it needed to fully utilise the scheme allotment was about 2 200 labour-hours. This could have been drawn either from hiring an additional labourer or, preferably in this context, from time spent on less indispensable domestic activities. The consequences of what happened in reality were, however, quite significant. By operating at about only 56 per cent of plot capacity, the household was able to realise a maximum income margin (after input and labour costs) of only about K97 or 27 per cent of the possible gross earnings. At this level, the labour cost alone was about 41 per cent of gross earnings, almost equal to the income that the household was able to retain for itself.

The above possible and actual performance point to two or more alternative requirements for improving the household's income. The basic requirement was the need to increase household labour-time (from time spent on leisure). This could be done either together with retaining or even increasing hired labour-time, or by reducing the latter, so that the household could be seen as paying itself rather than the hired labourer. The actual situation was that the household opted for the latter, presumably because it could no longer tolerate the falling net income level.

As the income/input cost structure began to change, towards a gradual reduction in real *net income*, the idea by the commodity producers of reducing and replacing hired labour-time became increasingly urgent. The process of reducing hired labour did indeed continue, and by the 1980s hardly any farmer

employed a hired labourer on full-time basis. Only the few who still held more than 2 acres, particularly women farmers, retained a labourer. Even so, labourers were almost exclusively employed on a piece-work basis, mainly for land preparation work. This phenomenon probably also explains the increasing popularity of the work-oxen and mechanical tiller/leveller methods of land preparation.

It is understandable why this labour substitution might have been felt as the necessary thing to do. By 1983, farmers were able to plant an average of only 1.23 acres. If their realised output had been at the planned maximum rice yield level (assuming they had not let out any part of their allotment), the possible gross income would be K402 and the net income K294. If they had employed a full-time labourer, at K209, their retained income would be only about K85, just 41 per cent of the labourer's income (Simukonda, 1986: 303-6). Thus, the simple reasoning behind reducing (or eschewing) hired labourer services is that it does not seem rational if one's employee earns more than what you are able to earn from your own operation. But then, what explains the gradual fall in the allotment size that seems to have compelled scheme farmers to place themselves under such production limitations?

### **The drudgery factor**

Equally important in the context of performance, appears to be the *drudgery* phenomenon, often perceived more in psychological than physical terms. A theoretical comparison between the initial and subsequent periods might shed light on this. It is obvious that agricultural (crop cultivation) work entails a great deal of physical effort. Rice production, particularly according to the irrigation method, is particularly demanding of such effort. It saps one's energy so much that there is little time and effort available to do anything else. Thus, during the initial period, Hara farmers realised that their necessary non-scheme operations would significantly suffer unless hired labour were employed. That situation applied less after the initial period, when the farmers had sufficiently adjusted to the new pattern of labour-time allocation, especially with respect to work stages beyond the rather strenuous land development work. Therefore, when farmers decided to increase the amount of household labour-time instead of hired labour-time, this was done mainly for two reasons. On the one hand, it was because they placed a higher value on the expected income, relative to the associated rise in the physical burden of work. On the other hand, it was because they perceived the benefit of the marginal income to be higher than the cost of non-scheme production and the leisure-time that they would forgo in the process. In reality, however, their commodity production performance gradually fell at the same time as the real producer income was falling too.



The plausible explanation for this commodity-related behaviour, therefore, appears to be that the farmers were becoming increasingly unable to accommodate the negative change in their income status. This situation, which can be translated into the concept of *drudgery*<sup>7</sup> as a human feeling or perception, is defined by two main dimensions. One applies in a psychological sense. It focuses on the individual satisfaction from attainable commodity income, relative to the benefits of non-scheme activities, both of a productive and a social/leisure type. In other words, scheme farmers were becoming increasingly dissatisfied with their inability to achieve non-scheme production and to pursue their customary pattern of life, simply because the value of attainable commodity income failed to compensate for this loss. As a result, commodity operations became increasingly burdensome. Farmers consequently, responded by gradually withdrawing household labour-time, at each stage to a level of commodity operations which reflected the best compromise between the value of the income and its opportunity cost, in the form of customary production forgone. This conceptualisation places commodity relations in a dynamic context, in the sense that it explains the continual decline of the average performance level in the commodity scheme, consistent with the continual fall in commodity income.

Another dimension applies to the sense of *physical* drudgery. This is simply that farmers had to supply more productive labour-hours than normally necessary to meet subsistence production needs in the traditional sector. It has been stated that at the very beginning, farmers had to stretch themselves to the limit of their ability and/or endurance, just in order to be able to participate in the commodity scheme in pursuit of superior income prospects. It has also been stated that in order to meet the official minimum commodity requirements, to retain membership of the scheme, farmers had to hire additional labour-time. Therefore, when the rate of income began to fall, their initial response was to proportionately substitute household labour-time for hired labour-time. This was done simply to maintain the level of income earned, or at least to keep the reduction to a minimum level. This means the farmers had to endure the increasing physical burden of simultaneously carrying out commodity and domestic/traditional production. In physical terms, however, there is a scale of operation at which further labour application becomes impossible, particularly when the labour substitution process is complete. At this level, the decision to begin scaling down the commodity operations, assuming the commodity income rate remains constant, is explained by the significant part played by the phenomenon of *fatigue*.

In practice, both the above dimensions apply simultaneously in varying degrees, depending on individual circumstances. Thus, the above conceptualisation provides the context and basis of the various types of individual commodity-

related behaviour responses, applying to withdrawal of household labour-time. Some farmers withdrew from the scheme completely, while others remained, albeit at reduced operational levels. This differential response, in time and scale, suggests a lack of commonality within the peasant society with respect to perceptions of a satisfactory level of income. Such differences apply to particular or individual circumstances and perceptions among the peasantry, relating to the defined purpose of commodity income.

A study carried out among the Hara Scheme farmers (Simukonda, 1986: 253-5) revealed the significance, in this context of the socio-economic and/or demographic backgrounds of households. For example, some people had been operating village retail shops and therefore sought commodity income to support their business operations. This was typical of the scheme farmers. Their basic reason for joining the commodity scheme was the expectation that commodity-derived income was far superior to any other income-generating activity they had been engaged in. Within this context, their withdrawal from the commodity scheme was generally based on disappointment with the reality of expected commodity benefits. Thus, some left the scheme to seek employment in distant places, apparently after raising enough funds to support the move. Others felt that the original pressure to join the commodity scheme no longer existed (e.g. the need to raise funds for supporting their children's secondary school education). However, the majority withdrew, partially or wholly, to return to their previous mode of social and economic life. They were those who felt that the cost of commodity output, relative to its income benefits, was not worth the sacrifice of the freedom to pursue their traditional pattern of production and social activity. They therefore decided to exercise their basic freedom to rid themselves of the entrapment of commodity relations, which could no longer be justified by their original income claims. Such producers included those who returned to their rain-fed rice scheme operations on traditional land. Therefore, those who remained consisted of the "semi-captured peasantry", who would normally grow rice for cash, with or without the irrigation scheme.

The main difference between the two categories of farmers is that those who withdrew for alternative cash-related production in the traditional sector, felt that the loss of production decision-making in the commodity scheme was more than compensated for by the higher production/ income opportunities it offered. Therefore, they came to be "effectively" entrapped in the supposedly marginal production/income benefits of the commodity scheme<sup>8</sup>. For some, the commodity scheme provided the necessary additional cultivable land, for meeting the total subsistence requirement while also yielding some income. But in the case of all farmers, it offered the only official access to superior agricultural technology (e.g. high yielding seed and agricultural tools) on credit, as well as continued agricultural training. After all, their labour burden and

domestic opportunity cost were significantly reduced by having the limited discretion to reduce their operations to one acre of land. This had become the minimum officially acceptable allotment size, down from the original standard two acres. Nevertheless, by 1984, most farmers had reduced themselves to operating at a level which was almost the same as in average traditional land operations.

The conclusion derived from this, therefore, consists of two main dimensions applying to the status of the peasantry in relation to commodity production. On the one hand, there is no doubt that commodity production, as demonstrated by the Hara rice irrigation scheme, offers households the opportunity to increase their income for improved socio-economic life. This opportunity is provided not only by the superior agricultural technology used, but also the ready access to such technology through the official credit facilities. Yet, this opportunity comes at significant cost. Participation in commodity production compels households to work at minimum levels of labour-time, which greatly increases labour-time application beyond the amount necessary to meet subsistence requirements. This has further effects on the need and desire to meet subsistence and other domestic production requirements, as well as on the freedom to decide on the allocation of labour-time.

The other dimension relates to the value of achievable commodity income. Experience so far suggests that the state is unlikely to pass the economic gains of commodity production onto the peasant producers at the maximum level. Instead, it is likely to pass on to them any structural cost increase. Therefore, given this principle, as the peasantry become economically worse off, they respond by withdrawing their labour-time. The overall consequence is that while the state may continue to enjoy maximum benefits through the overall commodity output achieved, the peasantry become reduced to almost their original low income and, therefore, socio-economic status. This is at least what the Hara experience suggests, although in other cases, such negative consequences may apply to both parties, or even more so to the state (see e.g. Simukonda, 1994: 298).

### **Further analysis**

Generally, therefore, it appears that commodity income and drudgery exist for the peasantry, in inverse proportions, from the point of view of supplying the necessary productive labour-time. Within the context of its application to income, the significance of drudgery for the peasant is defined more in psychological than physical terms. Thus, the greater the value placed on attaining a particular level of income, the lower is the level of drudgery perceived. Therefore, it is arguable that once the desired or needed level is

reached, the perception of drudgery begins to increase dramatically. This may apply to a given level of commodity operation, or more seriously, to any increase in the operational level.

Against the background of the above analysis, the question may be asked: what would be the response if there were a change in the rate of commodity income? There may be two possible types of producer response. One is based on the idea of a possible "target income". It appears that when there is a negative change in the rate of income, producers would increase the level and quality of production, just to ensure that the desired/needed income is maintained. This suggests that from the point of view of the interests of the state, it would not be wise to permit a gradual increase in the rate of achievable net income. The alternative response is when the producer's income goals are almost insatiable. If so, the state would be wise to implement a policy that allows for a positive change in the rate of achievable income. This would encourage producers to aim at increasing the scale of production, and, within the limitations imposed by the size of allotment and technological levels, to improve the standards of production. Furthermore, it would encourage farmers to remain in commodity production, and to seek to maximise the cash disposal of the crop. This would serve the interests of both the state and the producers very well. The state would maximise the amount of the crop output. In addition, retaining the same, motivated individuals in scheme membership means that the cost of the commodity scheme could be falling, as it would require less and less resources to be spent on the training and supervision of farmers. The producers, on their part, would increase their household income levels, and enjoy a higher standard of living.

## CONCLUSION

The Hara experience suggests several alternative social responses to commodity relations among the peasantry. First, it suggests that commodity production is significantly sensitive to labour supply. The supply of productive labour-time is determined as much in absolute (physical) terms as in relative (psychological) terms. These aspects converge on the level of commodity-derived income that could be earned. The value of such income is perceived in relation to the extent to which it permits households to enjoy higher consumption levels, while minimising loss of production and other activities within the traditional or subsistence sector. The latter include: necessary subsistence production and domestic activities, desired social and leisure activities and physical rest, as well as other social obligations. Secondly, it suggests that the peasantry are amenable to change consistent with the defined goals of commodity-derived income, so long as this kind of income more than compensates for loss of alternative, traditional sources of income. Lastly, it suggests that a process of

socio-economic differentiation is possible within the peasant economy, at least in sociological terms. This is reflected in the respective behaviour of both parties in commodity production. The state on its part, prefers a system of selecting farmers for commodity production scheme membership. The peasantry on their part, seek to employ hired labour either to boost the total amount of the required labour-time for higher income levels, or to substitute household labour-time for reaching a more comfortable level of life.

In this context, it is likely that the transformation of the peasant economy is likely to suffer on the account of serious practical realities, based on the interaction of the interests of the state and the peasantry. Typically, in its commodity programmes, the state tends to pass on to the peasant producer a greater part of any increase in cost of production. This tends to have a negative impact on the producer's enthusiasm to provide the required higher levels of productive commodity labour-time. Therefore, the producer utilises any available method to withdraw from commodity relations. The Hara experience suggests that such withdrawal could be in the form of resigning from membership of the commodity scheme or simply reducing the level of production. And where there is an improvement in the cost-price structure, the state is often reluctant or slow to adjust input and producer prices in favour of the farmer.

It is arguable, therefore, that such a process tends to reinforce the condition of "peasantness". And this may be viewed as failure of state commodity programmes to effectively transform the peasantry into real commodity producers, whether in a sociological or a materialist sense. It is possible that such experience is of wider application in sub-Saharan Africa, and perhaps elsewhere, albeit based on varying forms of production dynamics.

## ENDNOTES

- <sup>1</sup> The four IRDPs were allocated on the basis of political Region. Since Malawi has three Regions (Northern, Central and Southern) two projects were allocated to the Central Region. But a project only covered the area of one to two administrative districts.
- <sup>2</sup> Actually, only one of the irrigation subschemes (Lufila) was initiated by KRDP and financed by the World Bank. KRDP came to inherit the other two (Hara and Wovwe) which had been established earlier by the Malawi Government. They were the only ones with farmer settlement facilities, which accommodated farmers from more distant places.

- <sup>3</sup> Despite this, the Hara Scheme was officially viewed as a regional facility, as it allowed settlement of a few farmers from the rest of Malawi, mostly from Northern Region.
- <sup>4</sup> Both the income and labour-time figures for irrigated rice are calculated on the basis of the two-acre standard allotment, double-cropped. Those for the other crop types are based on two acres according to the single (rain-fed) cropping pattern.
- <sup>5</sup> All irrigation schemes had clearly stipulated guidelines as to the criteria for the selection of farmers. They included demonstrated (or presumed) ability to carry out the expected high-level operations based on the area of cultivated traditional land, or previous training received in farming. For maintaining scheme membership, farmers had to comply with defined production procedures and good interpersonal farming behaviour. Such conditions were stipulated in the World Bank loan agreement (World Bank, 1972).
- <sup>6</sup> All calculations are based on official statistics, applying to: input and crop prices, KRDP's standard input packages generally per acre, and recorded rice farm output and scheme allotment utilisation rates in the Hara irrigation scheme.
- <sup>7</sup> See A V Chayanov (1966), for a detailed analysis of the concept and context of drudgery.
- <sup>8</sup> See, for example, Bernstein (1982: 165-6) on what he calls "The Simple Reproduction 'Squeeze'".

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