

Labour Supplies in Historical Perspective: A Study of the Proletarianization of the African Peasantry in Rhodesia*

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SUMMARY

The article attempts to show that W. A. Lewis's model of economic development with 'unlimited' supplies of labour has a far more limited application to the Rhodesian experience of capitalist development than W. J. Barber has assumed. 'Unlimited' supplies of labour were to a large extent the result of a process of 'primary accumulation' in which political rather than market mechanisms predominated and through which the gap between labour productivities in the peasant and capitalist sectors was progressively widened.

Thereafter, supplies of labour did become 'unlimited' and, for a period of about two decades, the Rhodesian economy displayed the main features of the Lewis model. However, owing to structural changes initiated by World War II (growing dominance of the economy by foreign oligopolies, development of a manufacturing industry, growing 'superiority' of capital intensive techniques, etc.), Lewis's assumption that investible surpluses are reinvested *in loco* so as to 'widen' capital ceased to be valid in the post-war period.

Barber's failure to understand the real nature of capitalist development in Rhodesia is attributed to the general antihistorical bias of modern economics.

In an article that was to become a classic of modern development theory,¹ W. A. Lewis proposed a two-sector model of labour reallocation from a low productivity 'subsistence sector' to a high productivity 'capitalist sector'. In the former all individuals have a right to receive means of subsistence in quantities determined by custom and, in the last instance, by average productivity in the sector in question. In addition, Lewis postulates that in this sector there is a surplus of labour ('disguised unemployment') in the sense that part of the labour force could be withdrawn without causing a reduction in total output, or at least without causing a reduction greater than the amount of means of subsistence customarily allocated to them. Under these conditions, individuals are assumed to be prepared to leave the subsistence sector and seek employment in the capitalist sector when the wage rate in the latter is some 30-50 per cent higher² than the conventional subsistence income in the former. Since productivity in the capitalist sector is postulated to be sufficiently high to make the payment of the above wage rate consistent with the rate

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of profit that employers expect in order to undertake production, the capitalist sector is said to enjoy 'unlimited' supplies of labour in the sense that, at that level of wages, practically everybody in the subsistence sector is prepared to enter wage employment.

Provided that average productivity in the subsistence sector does not increase, pushing up the conventional subsistence income, the capitalist sector can therefore expand indefinitely without an increase in wages becoming necessary to attract growing amounts of labour. In this way, the *per capita* income of workers and peasants remains constant and the investible surplus increases absolutely and as a proportion of aggregate output. Since Lewis further postulates that the entire surplus is always reinvested in a way that increases the demand for labour, the process continues until the 'surplus of labour' in the subsistence sector disappears.

Lewis points out, however, that wages may rise before the process is completed, thus slowing down capitalist accumulation, if average productivity in the subsistence sector increases, something that may happen for any of the following reasons:

- (a) because the expansion of the capitalist sector is rapid enough to reduce the *absolute* population in the subsistence sector;
- (b) because of technological progress in the subsistence sector; and
- (c) because the terms of trade turn against the capitalist sector (assuming that the subsistence sector supplies foodstuff and raw material to the capitalist sector).

As we shall see, the last named possibility is of special interest to our analysis.

The above theory has inspired a good many studies of concrete development experiences. One such study is W. J. Barber's interpretation of the development of the African wage labour force in Rhodesia. Barber distinguishes four stages of such development:

(1) To begin with, the indigenous African economy is organized so as to be self-sufficient: real incomes and output are low and tastes are modest.³

(2) The second stage is inaugurated by the introduction of the money economy from outside. Because of the narrow horizons of the traditional society, the response of the indigenous peoples to 'unfamiliar' opportunities for increasing their real incomes may be 'delayed'. Historically, 'a prodding from the tax-collector has been required'.⁴

(3) 'After a period of adjustment', however, the indigenous peoples have attempted to acquire cash either through the sale of agricultural surpluses or through the sale of their labour. The latter is attractive only when it increases the total real income—in other words, it must supplement more than it subtracts from the income achieved through agricultural production.⁵ This opportunity cost of labour is determined by the social organization of production in the indigenous economies. According to Barber, the customary division of labour was such that the male's role was essentially one of providing at periodical intervals the development works of the community, besides hunting and the care of cattle, while most of the routine tasks in peasant agriculture were the lot of women.⁶ Development works were undertaken periodically, so that rather than 'general disguised unemployment', as postulated

by Lewis in his model, there was 'periodic disguised unemployment' of male labour in the sense that individual members of the family productive unit could be withdrawn for at least a full annual cycle without any sacrifice in indigenous agricultural production. Barber assumes that the proportion of the total adult male population required to maintain the integrity of the indigenous economy is, and has always been, 50 per cent. The capitalist sector could therefore expand without inducing an increase in real wages until its African labour requirements rose above this proportion. Up to the mid-1940s the employment of extraterritorial African workers prevented the proportion of able-bodied indigenous males in wage employment from rising above 45 per cent.⁷ Consequently, in the period 1929-45, while real wages showed a tendency to decline, the volume of African employment continued to expand.⁸

(4) The fourth stage is attained when the demand for African labour of the capitalist sector rises above 50 per cent of the total adult male population. An expansion of the supply to meet this level of demand implies a fall in the agricultural output of the indigenous family and therefore the supply of labour ceases to be perfectly elastic: 'To attract additional indigenous workers, . . . the employer in the money economy [is] obliged to offer a real wage which [offsets] the loss in the real income of the family in indigenous agriculture, and to provide a further increment to the real wage sufficient to induce the African worker to make this break with his accustomed way of life'.⁹ This stage, which Barber calls of 'quasi-full employment', was, according to him, attained in the late 1940s when the proportion of able-bodied males claimed by wage employment reached the 50 per cent mark. He then finds confirmation of this in the fact that, after 1950, African real wages began to rise.¹⁰

As we shall presently see, this interpretation of the development of the African wage labour force is questionable on a number of grounds. Before we proceed, however, it is interesting to point out some general assumptions which underlie Lewis's and Barber's analyses. These authors conceive of the underdevelopment of the African peoples as an original state which the development of a capitalist sector gradually eliminates. The development of capitalism thus emerges as an ultimately *beneficial and rationalizing influence* notwithstanding the fact (acknowledged by Barber) that, over long periods, African workers and peasants derived little, if any, advantage from it. Moreover, the development of capitalism is conceived of not only as an ultimately beneficial process but also as a *spontaneous process* in the sense that it is induced exclusively, or almost exclusively, by 'market forces' (i.e. the free choice of individuals on the market place) with no or little role assigned to open or concealed forms of compulsion.¹¹

The purpose of this paper is to show that neither Barber's interpretation of the development of an African wage labour force in Rhodesia nor his and Lewis's general presumptions concerning the relationship between underdevelopment and the development of capitalism find much supporting evidence in the Rhodesian experience. At the same time an attempt will be made to organize the above critique into an alternative theoretical explanation of the development of the African wage labour force in Rhodesia.

I

The first of Barber's assumptions that is inconsistent with the facts is that up to the late 1940s a situation of excess supply obtained in the labour market. Before 1920, owing to the combination of a relatively sluggish response of indigenous Africans to wage employment opportunities and unreliability of extraterritorial sources of labour, acute shortages of African labour were normal in periods of rising demand, i.e. 1896-1903, 1905-11, and 1916-19.¹² Thus, the situation in the African labour market of the late 1940s and early 1950s was no more one of 'quasi-full employment' than that obtaining during the above-mentioned periods. Moreover, Barber's assumption that the situation of 'quasi-full employment' lasted through the late 1950s, when African real wages continued to rise, is equally unfounded.¹³ In conclusion, far from starting off from a situation of normal labour abundance and ending up with one of normal labour shortage, the Rhodesian capitalist sector seems to have moved in the opposite direction.

Nor did real wages rise for the first time in the late 1940s. In the period 1896-1903 they rose markedly,¹⁴ and if thereafter they became sticky upward and flexible downward—so that in 1922, after fifteen years of predominant labour shortage, they were lower than in 1904—the reason cannot be sought for in the operation of market forces. The different behaviour of African wages before and after 1903 must instead be traced to the structural changes that occurred in the Rhodesian capitalist sector during the 1903-04 crisis, a discussion of which is beyond the scope of this study.¹⁵ Suffice it to say that, prior to that crisis, production was predominantly undertaken with a view to the speculative gains which a small group of promoters and financiers could reap by floating companies on the London financial markets. What mattered was the working of gold deposits *irrespective of the costs involved*. Profitability considerations did not therefore hamper the competitive upward pressure on wages resulting from the shortage of labour. The realization of the low profitability of Rhodesian enterprises, under existing cost conditions, led in 1903 to the collapse of the Rhodesian speculative boom in London and precipitated the above-mentioned crisis. The subordination of production to speculation ceased, and efforts were directed at reducing costs in order to enhance the profitability of those enterprises which had survived the crisis. One of the main aspects of this economy drive was to undertake the monopolistic organization of the African labour market.¹⁶

This situation was at the roots of what Bettison has aptly called 'the tradition of a subsistence wage':¹⁷ market mechanisms were largely discarded in the determination of wages, and the real wage rate came to be customarily fixed at a level that would provide for a subsistence of a *single* worker while working in the capitalist sector and a small margin to meet the more urgent of the *cash* income requirements of his family (which continued to reside in the peasant sector). The problem then became one of expanding the supply of labour to match demand at this customary level of wages. Like British capitalists in earlier times, Rhodesian employers, 'when they spoke of plenty in connection with supply, [they] had in mind not only quantity but also price'.¹⁸ Thus, as changes in wages were no longer to be the equilibrating factor in the labour market, political mechanisms became of crucial importance in closing gaps between supply

and demand, and they must therefore figure prominently in any interpretation of the development of the African wage-labour force.

Since Barber ignores political mechanisms, the shortcomings of his analysis are immediately apparent. It might be argued, however, that the labour shortages of the first three decades of white rule in Rhodesia were due to a 'delay' in African response to market opportunities for increasing their incomes and that extra-economic factors played the role of leading the African peoples on to the 'path of rational behaviour'. Once this had been attained, an excess of supply over demand appeared in the labour market and Barber's model became applicable. No evidence is, however, to be found to substantiate the assumption of so long a 'delay' in African response to market opportunities. It is possible that in the 1890s the African peoples showed some 'unfamiliarity' with such opportunities, but by the turn of the century this was no longer the case. Prior to 1904 European farming in Rhodesia was insignificant and the African peasantry supplied the bulk of the foodstuffs required by the mines. In 1903, for example, it was estimated that the annual amount received by Africans for sale of grain, other produce, and stock was in the order of £350,000,¹⁹ and there is much evidence that trade with the African population was at the time the most, if not the only, profitable activity carried out by the Europeans.²⁰ Further, when the development of European mixed farming and ranching created a demand for African-owned cattle, Africans were ready to sell them in large numbers.²¹ Though mainly limited to the sale of what may be called 'traditional' produce (grain, cattle and beer), African participation in the produce market also took other forms: the production for the market of green vegetables, potatoes, wheat, groundnuts and tobacco, for example, was either introduced or expanded, and the practice developed in the mining areas of deriving a regular income from hiring out bullocks to the mines for purposes of transport.²² And as we shall see Africans were equally prompt in investing and innovating in response to market opportunities.

As regards African response to opportunities for increasing their incomes through the sale of labour-time, the first point that has to be made is that there is no evidence to support the view that 50 per cent of the male labour force was in 'disguised unemployment'. Among the Shona peoples (who, at the end of the last century, represented over two-thirds of the African population in Rhodesia) and among lower-caste Ndebele,²³ men were not only in charge of development works, hunting and the care of cattle. They also helped the women in cultivating the land, especially at planting and harvesting time, and were in charge of a number of non-agricultural productive activities (weaving, net-making, iron-working, etc.) which must have absorbed a non-negligible amount of labour-time until they were supplanted by the importation of capitalist manufactures.²⁴ In addition, we should not ignore the fact that the labour-time of African males was not only absorbed by material production but also by activities which, though unproductive, were socially necessary. The point has been emphasized (perhaps over-emphasized) by J. van Velsen:

There are several fallacies in [the notion of 'leisure']. Those who hold this notion seem to think that unless people are working manually they are not using their time gainfully . . . If a similar view were adopted

for an industrialised European society all judges listening to cases in court, all bankers or business managers concluding important contracts. . . . and all those who are not actually using muscle power or even pushing a pen would be considered to be enjoying 'leisure' instead of working for their livelihood. This would, of course, be wholly unrealistic. It is equally unrealistic to think that people in tribal societies are indulging in unprofitable leisure unless they are handling a hoe or an axe or are doing otherwise physical labour. When men and women are sitting together the chances are that they are not just wasting their time in idle talk but are in fact settling a dispute over, say, garden boundaries or are discussing the desirability of moving the village to a better site, or, again, are arguing about the merits of some new farming techniques. . . . These are *activities* which vitally affect the welfare of individuals or the community as a whole.

In literate societies the knowledge of new laws, of new farming methods, of market trends, of new possibilities for earning money, and so forth, is very largely spread through the written word. . . . But in societies where many people cannot read such information is spread through the spoken word. . . .²⁵

In view of the above, we cannot assume that much 'disguised unemployment' existed in traditional African societies, though it can be safely assumed that a certain amount of *seasonal underemployment* existed among both Shona and Ndebele.

As this study will attempt to demonstrate, 'disguised unemployment' in Barber's or Lewis's sense was itself the result of the process of capitalist development which steadily restructured and eventually disrupted 'traditional' African societies. The very imposition of white rule on the Shona and Ndebele peoples, which opened up the territory to capitalist penetration, was a first cause of the appearance of some 'disguised unemployment'. For the *Pax Britannica* and the pillage of the African people that followed the establishment of white rule threw Ndebele men belonging to the upper castes into what may be called a state of 'structural underemployment'. While the imposition of the *Pax Britannica* prevented them from engaging in martial pursuits, the expropriation from cattle and land prevented them from fully reallocating their labour time to productive activities *within* the peasant sector (care of cattle and cultivation of the land).²⁶ The type of underemployment that the imposition of white rule induced among the vast majority of the African people (lower-caste Ndebele and all the Shona) was, on the other hand, of a very different nature. The imposition of the *Pax Britannica* released the labour-time (and means of production) previously allocated by the Shona to production of the surplus appropriated by the Ndebele (tribute and raids) and to a variety of defence preparations. It also released the labour-time of lower-caste Ndebele which used to be absorbed by the labour services exacted by upper caste Ndebele. At the same time, expropriation of land did not *immediately* restrict the quantity of land available to this section of the population because, as we shall see, they were generally allowed to remain on their ancestral lands. Moreover, they were also less affected by the expropriation of cattle because of the smaller quantities involved in the expropriation and because of the less central role played by cattle in their economies.²⁷

It follows that, in the short run and in as far as the vast majority of the

African population (i.e. excluding upper-caste Ndebele) was concerned, the imposition of white rule did not lead to a structural disequilibrium between means of production and (given techniques, size of population, tastes and wants) subsistence requirements of the peasant producers and their families. As a consequence, if some labour-time remained unutilized *within the peasant sector* ('disguised unemployment'), this was not due to a shortage of means of production relative to the total labour-time available, but rather to seasonal variations in agricultural production or to a *lack of incentives* to apply such labour-time to agricultural production;²⁸ and if 'little' labour-time was sold on the labour market, this was more likely to be due to the fact that the effort-price of cash income earnable through the sale of produce was lower than that earnable through wage employment, rather than to an alleged lack of African response to market opportunities for increasing their incomes.²⁹

Most contemporary observers did in fact agree that the effort-price of participation in the produce market was far lower than that in the labour market. For example, in 1903 it was estimated that the latter was generally three times as large as the former.³⁰ The conclusion that the behaviour of the African peoples during these early days was consistent with an allocation of labour-time aimed at increasing their incomes is further warranted by the existence of marked seasonal variations in the supply of African labour and by discrepancies in the Ndebele and Shona rates of participation in the labour market.³¹ While the seasonal variations in labour supplies show that, to the extent that there existed underemployment in the peasant economies, Africans were ready to enter wage-employment to supplement their incomes, the greater participation of Ndebele men in the labour market shows that the more 'structural' in character the disguised unemployment (and therefore the lesser the possibilities of absorbing all labour-time within the peasant sector) the greater the amount of labour-time allocated to wage employment.

Besides misinterpreting the situation in the labour market at the initial and terminal points of the process of formation of the African wage labour force, Barber misses some significant tendencies in African response to wage employment opportunities. These tendencies can be perceived by comparing the relationship between changes in real wages and changes in the rate of African participation in the labour market at different points in time. A first set of relevant data has been collected in Fig. 1 which shows trends of three crucial variables during the period 1904-45. These variables are:

(a) The rate of African participation in the labour market (L_i/N_i), i.e. the ratio of the average number of indigenous African males in wage-employment at any given time (L_i) to the total number of indigenous African males over 14 years of age (N_i).

(b) The wage-employment/population ratio (L/N_i), i.e. the ratio of the total number of African males (indigenous and extra-territorial) in wage employment (L) to the total number of indigenous African males over 14.

(c) The proportion of extra-territorial Africans in the total African labour force (L_f/L).

Variations in the first ratio may be taken to reflect changes in the responsiveness of the indigenous population to wage employment opportunities,

provided that their participation in the labour market was not unduly restrained by difficulties of obtaining employment. This condition can be assumed to have been fulfilled when the L_i/N_i ratio was rising or when there was a labour shortage. For this reason we shall limit our intertemporal comparisons to five periods: 1904-11, 1915-22,³² 1922-26, 1932-38, and 1939-43.

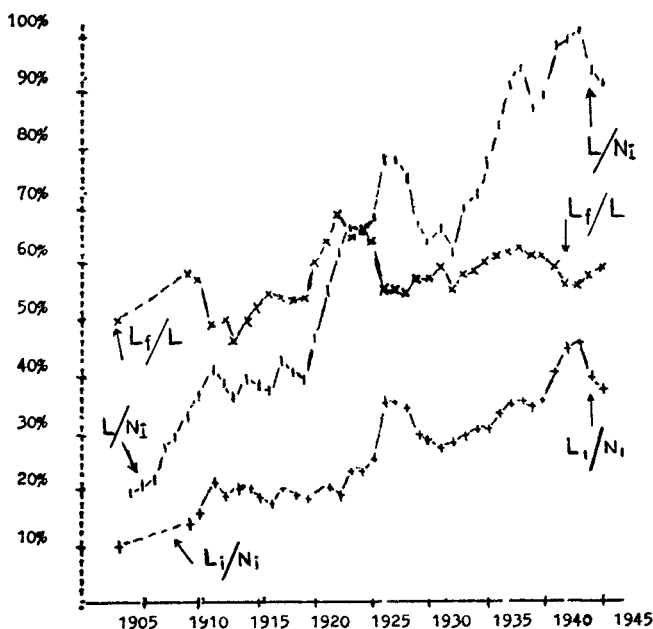


Figure 1: Trends in the African Labour Market, 1904-45

Sources: Derived from *Annual Reports of the Chief Native Commissioners* and *Annual Reports of the Chamber of Mines of Rhodesia*

The scanty evidence on money wages and costs of living during these five periods has been collected in Table 1.³³ Though the data, especially those in brackets, are not sufficiently reliable to form the basis of accurate estimates of the magnitude of the changes in African real wages, they are satisfactory for our purposes, namely for identifying the *direction of change* of real wages and, secondarily, for a rough assessment of their comparative magnitude. Taking into account the fact that the European cost of living index shown in the table grossly underestimates the rise in African cost of living between 1914 and 1922 and between 1939 and 1943,³⁴ the figures of Table 1 show that African real wages decreased rapidly in the two periods 1904-22 and 1939-43, that they increased moderately fast in the two periods 1904-11 and 1922-26, and that they probably decreased (or at best remained constant) in the period 1932-38. In Table 2, these data on real wages are juxtaposed to the rate of African participation in the labour market for the corresponding periods.

The most striking fact emerging from this table is the changing relationship between the two variables. A few intertemporal comparisons will illustrate the point. A roughly similar increase in real wages was associated with a moderate increase in the L_i/N_i ratio in 1904-11 but with an excep-

tionally large increase in 1922-26; a roughly similar decrease in real wages was associated with a constant Li/Ni ratio in 1914-22 but with a large increase thereof in 1939-43. Conversely, a moderate increase in the Li/Ni ratio was associated with rising real wages in 1904-11, but with falling (or at best constant) real wages in 1932-39; a large increase in the Li/Ni ratio was associated with rising wages in 1922-26 but with a fall in real wages in 1939-43.

TABLE 1
AFRICAN MONEY WAGES AND COST OF LIVING INDEXES FOR SELECTED YEARS

Year	Average Wages			Cost of Living Indexes	
	Including Rations s.	Mining Excluding Rations s.	Agriculture Including Rations s.	European Cost of Living (Food, Fuel and Light) 1914 = 100	African Imports Price Index 1914 = 100
1904	46/9 (a)	39/- (a)			148 (g)
1911		(32/-) (b)			94 (g)
1914		(28/-) (b)		100 (f)	100 (g)
1922	45/- (c)	(28/-) (b)	20/- (c)	114 (f)	195 (g)
1926			21/8 (d)	109 (f)	(168) (g)
1932		25/10 (e)		94 (f)	
1938	32/6 (e)	23/6 (e)		93 (f)	
1939	34/- (e)	24/11 (e)		94 (f)	
1943	42/- (e)	27/5 (e)		112 (f)	

Notes and sources (a) *Annual reports of the Chamber of Mines of Rhodesia*. (b) Estimated by the author on the basis of information on changes in African wages given in the following *Annual Reports of the Chief Native Commissioners, Annual Reports of the Chamber of Mines of Rhodesia, B.S.A. Co., Directors' Reports and Accounts* (various years), S Rhodesia, *Report of the Native Affairs Committee of Enquiry, 1911*; S Rhodesia, *Report of the Cost of Living Committee, 1921*. (c) 'Natural Resources' (Summary of Lecture delivered by Mr. L. Cripps before the Rhodesian Scientific Association) in *Official Yearbook of the Colony of Southern Rhodesia, No. 1, 1924*. (d) S. Rhodesia, *Report on Industrial Relations in Southern Rhodesia by Professor Henry Clay, 1930*. (e) *Economic and Statistical Bulletins of S. Rhodesia, II, 13, VI, 8, VI, 10; XIV, 4; and XIV, 5*. (f) *Official Yearbook of the Colony of Southern Rhodesia, No. 3, 1932, Official Yearbook of Southern Rhodesia, No. 3, 1952* (g) Calculated by the author on the basis of data taken from the *Annual Reports of the Controller of Customs*. The commodities included in the index are those which according to the Controller of Customs were purchased by Africans and for which physical quantities were available, i.e. biscuits, coffee, preserved fish, rice, sugar, candles, matches, soap, boots and shoes, hats and caps, hoes and picks. The weights used in the calculation of the index are not based on the amounts spent on them by the African population, about which we have no information, but on the value of imports (which includes consumption on the part of Europeans).

These comparisons suggest that the conditions affecting the supply of African labour did not change once and for all after an initial 'prodding from the tax-collector', as Barber puts it, but that they altered *continuously* and in the direction of greater responsiveness to wage employment opportunities. Moreover, while before 1922 African participation in the labour market did not increase in periods of falling real wages, after that year it always increased irrespective of whether real wages were falling, rising or remaining constant. It is hardly necessary to emphasize that

these phenomena have to be taken into full account in our analysis of the development of the African wage labour force.

TABLE 2

CHANGES IN THE RATE OF AFRICAN PARTICIPATION IN THE LABOUR MARKET (L_i/N_i) AND CHANGES IN REAL WAGES, SELECTED PERIODS

<i>Period</i>	<i>Change in L_i/N_i (Yearly Average)</i>	<i>Change in Real Wages (increase. +, decrease. —, no change: =)</i>
1904–1911	+1	+
1915–1922	0	—
1922–1926	+4	+
1932–1938	+1	— (or =)
1939–1943	+3	—

Notes and sources: The data of the first column have been derived from Fig. 1 and represent the average yearly increase in the per cent values of the ratio. The increase in the L_i/N_i ratio for the period 1904–11 has been adjusted downward (from 1.5 to 1) for two reasons: (a) because in 1911 'abnormal' extra-economic pressure was exercised on the African people to induce them to seek wage employment (cf. p. 14 below), and (b) because in this period there was a reduction in the rate of participation of Rhodesian Africans in the South African labour market so that the increase in L_i/N_i recorded in Rhodesia partly reflected a 'territorial shift', rather than an overall increase, in African participation in the labour market. Available data do not permit an accurate assessment of this 'territorial shift', but estimates given in the *Annual Reports* of the Chief Native Commissioners indicate that the proportion of Rhodesian African males working in South Africa declined from 3.9 per cent in 1905 to 2.7 per cent in 1910.

II

We have seen that available evidence does not support the view that the low rate of African participation in the labour market during the early days of white rule was due to an alleged lack of response on their part 'to unfamiliar opportunities for increasing their real incomes' as Barber and others have presumed.³⁵ The reasons for this low rate must be sought elsewhere, namely in the 'discretionary' character of African participation in the money economy and in the low comparative effort-price of income earnable through the sale of produce.

Let us distinguish between 'necessary' and 'discretionary' material requirements of a society—the distinction being based on custom and habits as well as physiological criteria. We may then assume that in these early days, and with the exception of some sections of the Ndebele people, there existed a rough balance between means of production and means of subsistence (i.e. the 'necessary' requirements of the population) within the peasant sector of the Rhodesian economy. Participation in the money economy, *whatever its form*, was therefore 'discretionary' in the sense that it was not essential to the satisfaction of the subsistence requirements of the African population. In such a situation the stimulus to participate in the money economy is obviously weaker than in a situation in which the sale of labour-time and/or of produce fulfills subsistence requirements. This is a factor, however, that affects the *intensity* rather than the *form* of participation in the money economy. That is to say, whether such participation is 'discretionary' or 'necessary' is something that affects more the

total amount of labour-time allocated to it, than the *distribution* of this total amount between wage employment and production for exchange. This distribution, on the other hand, will be mainly determined, as previously noted, by the comparative effort-price of cash income obtainable from the two forms of participation.

We have already seen that the comparatively small effort-price of cash income earnable through the sale of produce was in fact the main factor restraining African participation in the labour market. We may now add that this factor was in turn traceable to the lack of population pressure on the land and the high prices paid for African produce. The latter is of particular significance because it highlights one aspect of the relationship between the development of capitalist agriculture and the development of the African wage labour force. Lewis mentions this relationship by way of qualification of his theory outlined at the beginning of this article:

The increase in the size of the capitalist sector relatively to the subsistence sector may turn the terms of trade against the capitalist sector (if they are producing different things) and so force the capitalist to pay workers a higher percentage of their product, in order to keep their real incomes constant. . . .

If the capitalists are investing in plantation agriculture side by side with their investment in industry we can think of the capitalist sector as self-contained. The expansion of this sector does not then generate any demand for anything produced in the subsistence sector, and there are therefore no terms of trade to upset [our theory].³⁶

Thus in Rhodesia, the expansion of the mining industry and of tertiary activities without a comparable development of capitalist agriculture generated a demand for, and tended to raise the price of, African produce, and this discouraged African participation in the labour market at the wage rate fixed by 'the tradition of the subsistence wage'.

Against this background, and bearing in mind that political rather than market mechanisms were to be the equilibrating factor in the African labour market, let us see what measures were taken by the Government to eliminate the labour shortage.

Forced wage-labour was an obvious device for closing gaps between supply and demand in the labour market and it was widely resorted to in the early days of settlement:

Native Commissioners or Inspectors of Police called on the various chiefs and headmen, informing the villagers that a certain percentage must work for the white man in return for a minimum wage of 10s. per month as well as board and lodging; these orders were enforced by African policemen who often exceeded their authority.³⁷

This practice was one of the causes of the African Rebellions of 1896-97 and was subsequently abandoned, at least in its crudest forms, in order to avoid a costly repressive apparatus. But even as late as the early 1920s 'a hint from the Native Commissioner to some of the headmen [would] usually bring out the desired number of young ones to work'.³⁸ In 1908-9 a 'hint' of this sort increased the supply of labour in two districts by 50 per cent, and the abnormally high rate of African participation in the labour market recorded in 1911 was largely due to pressures of this sort.³⁹

Measures of a different order—less risky and costly and more permanent

in their impact—were necessary if capitalist development in Rhodesia was not to be seriously restrained. Taxation seemed at first to provide the solution as it would reduce the 'discretionary' nature of African participation in the money economy. A hut tax of 10s. for every adult male and 10s. extra for each wife exceeding one was imposed as early as 1894, and ten years later it was replaced by a poll tax of £1 on each male over 16 and 10s. upon each wife exceeding one. When the hut tax was first introduced, payment in kind was accepted but it was soon discouraged in order to induce Africans to earn their tax by wage labour.⁴⁰

Taxation had, however, some shortcomings. For taxation, by not discriminating between incomes obtained from sale of produce and incomes obtained from the sale of labour-time, did not alter the discrepancy between the effort-prices of the two types of income. It could therefore, as it did in many instances, simply lead to the extension of the acreage under cultivation and/or to more intensive cultivation of the land. This was not, of course, the case in those areas which were located far from the centres of capitalist development (mines, towns and lines of communication) and were not reached by traders. For Africans living in these areas the only way to earn money to pay taxes was to sell their labour-time.⁴¹

Our previous discussion of the causes of low African participation in the labour market suggests that those measures which would significantly increase the effort-price of participation in the produce market would also be the most effective ones in solving the labour problem. Land expropriation was undoubtedly the major such measure though, as we shall see, its effects materialized in a more complex way than is commonly assumed. By 1902 the African people had been expropriated from more than three-quarters of all the land in the country.⁴² This expropriation did not, however, mean an immediate restriction upon the land resources available to the African peasantry, for they were generally allowed to remain on their ancestral lands upon payment of rent or commitment to supply labour services. Roder has remarked the 'feudal' nature of these relations:

The moment a man had pegged his farm, he regarded the African villagers on it as his serfs, who would have to work for him. The chief means of mobilising this pool of labour in the first years was the *sjambok* or hippohide whip, and after 1908 labour agreements which committed tenants to work several months, usually three, for the privilege of remaining on their ancestral land.⁴³

In 1909 the British South Africa Company (B.S.A. Co.) imposed a rent charge on the so-called unalienated land (i.e. land which had been appropriated, but not yet sold or granted to individuals or companies, by the B.S.A. Co.) so that all Africans residing outside the Native Reserves came to pay a rent.⁴⁴ In addition to rents and labour services, European land-owners exacted various fees (grazing fees, dipping fees, etc.) which were so exorbitant that 'within a few years [they went] far towards paying the purchase price of the farm'.⁴⁵

The reasons why Africans were not removed from their ancestral lands at this stage are not far to seek. As the Native Affairs Committee of Enquiry (1911) pointed out, 'it would be very short-sighted policy to remove these natives to reserves, as their services may be of great value to future European occupants'. Land was abundant and labour scarce, so that land with no labour on it had little value. That is to say, the

establishment of semi-feudal relations was the most effective short-term solution to the labour problem. Also valuable to the capitalist economy were the rents and other payments exacted from African tenants. Quite apart from the financial contribution that they made to the nascent European agriculture, companies and individuals who had acquired vast tracts of land for speculative purposes and who were still influential with the Government welcomed this source of revenue which did not depend on development efforts on their part. Another reason why the Administration allowed Africans to reside on expropriated land was in fact that the capitalist sector continued to rely heavily upon African supplies of produce, and any reduction thereof would have seriously hit the dominant mining interests. The development of capitalist agriculture had therefore a double significance for the expansion of African labour supplies, for it would at one and the same time eliminate the terms-of-trade effect of capitalist development (cf. pp. 212-13) and free the hand of the Administration in expelling Africans from expropriated land, thus further raising the *effort-price* of their participation in the produce market.⁴⁶

Market forces were, however, hampering the establishment of capitalist agriculture on a sound economic footing: the low opportunity cost to the African peasantry of supplying surpluses of 'subsistence produce', the scarcity of cheap wage labour,⁴⁷ and the smallness of the financial resources at the command of would-be European farmers, were all factors that made the latter's economic position precarious. Moreover, capitalist agriculture was a highly risky enterprise. For the market was relatively small and prices, being mainly determined by African production of marketable surpluses, fluctuated widely from season to season.⁴⁸ It is not surprising, therefore, that the white settlers chose the more profitable opportunities offered by trading, transport work, and various occupations connected with mining, construction, commerce and speculation rather than farming. Prior to the 1903-4 crisis, those Europeans who were interested in agriculture were either part-time farmers devoting themselves to more profitable activities or, as it was the case with many Afrikaaners who had trekked to Rhodesia, they were subsistence cultivators indistinguishable (by style of life, techniques of production, and crops cultivated) from the African peasantry.⁴⁹ Even during the season 1903-4, when European agriculture had begun to develop, there were only 948 holdings in occupation by Europeans who accounted for approximately 5 per cent of the total acreage under cultivation and for less than 10 per cent of the total marketed output.⁵⁰

Under these circumstances, the 'take-off' of European agriculture after the 1903-4 crisis could only be brought about by other than market mechanisms. The establishment of semi-feudal relations, discussed above, was one such mechanism, probably the main one; while the exaction of labour services remedied the labour shortage, rents and fees were an important source of finance for capital accumulation. It also became customary for European landowners to market their tenants' produce, and often that of neighbouring peasants as well, a practice that must have effectively prevented Africans, or traders on their behalf, from underselling European producers.

State power was brought to bear in other ways upon the strengthening of the white farmers' competitive position. In 1904 there occurred a major shift of the burden of taxation, i.e. from the settlers and foreign capital

on to the African population (cf. Table 3), and while government expenditure on African agriculture remained negligible for at least another decade, expenditure on European agriculture soon became one of the major items in the Government budget.

TABLE 3
DISTRIBUTION OF PUBLIC REVENUE BY SOURCES

	Period 1.4.01 to 31.3.04 (Yearly Average)		Year ended 31.3.05	
	£ '000	% of total	£'000	% of total
Paid by Africans	122.1	26.8	187.6	41.4
Paid by non-African residents	150.1	33.0	122.8	27.1
Paid by foreign capital	87.3	19.1	67.1	14.8
Services rendered (Posts and telegraph, land sales, etc.)	96.4	21.1	75.7	16.7
TOTAL	455.9	100.0	453.2	100.0

Sources: *Annual Reports of the Administrator of S. Rhodesia.*

A Department of Agriculture was set up in 1903 to assist European agriculture, and four years later the B.S.A. Co. established central farms, where settlers could acquire a knowledge of local farming before taking up their own holdings. Subsequently the technical work carried out by the Department of Agriculture greatly expanded: it distributed various kinds of improved seeds and plants; it advised on the cultivation of new crops; it carried out various experiments in collaboration with individual growers; it opened an experimental farm at Gwebi; it assisted in water boring works by providing equipment and expert advice at cost price.⁵¹ White farmers also received significant financial assistance at subsidized interest rates.⁵²

In the next section we shall analyse the process whereby the development of capitalist agriculture contributed to the solution of the labour problem and we shall see that that process took roughly two decades. In the meantime, however, such development, by increasing the demand for labour, intensified the shortage. The role played by the recruitment of extra-territorial African workers in making possible rapid capitalist development during a transitional period can therefore hardly be exaggerated. Since capitalist development in the southern African sub-continent generated demand only for the labour and not for the produce of the African peasantries of the northern territories, the extension of taxation to such territories, the recruiting activities of various government and private agencies, and, subsequently, the spreading of new tastes and wants, soon turned Northern Rhodesia (Zambia) and later Nyasaland (Malawi) and Mozambique into reservoirs of cheap labour which enabled Rhodesian employers to overcome the labour shortage of the first two decades of this century: as shown in Fig. 1, the proportion of extra-territorial Africans in the total African wage labour force rose from less than 50 per cent in 1904 to 68 per cent in 1922.

III

In analysing the process whereby the sale of labour-time became a necessity for the African population of Rhodesia, attention must be

focused upon two tendencies: (a) the transformation of 'discretionary' cash requirements into 'necessary' requirements; and (b) an upward tendency in the effort-price of African participation in the produce market resulting from a growing disequilibrium between means of production (mainly land) and population in the peasant sector and a weakening of the peasantry's competitive position on the produce market.⁵³

(a) The introduction of the compulsory payments discussed in the previous section was the main factor making necessary African participation in the money economy. In addition, there were forces which worked in the same direction in a more gradual way. As mentioned, the terms 'necessities' or 'subsistence' are not to be understood in an exclusively physiological sense: people get used to what they consume and 'discretionary' consumption items can, with the mere passage of time, become necessities whose consumption is indispensable.⁵⁴

In *periods of rising incomes* the subsistence requirements of consumers tend to increase, for *new* goods are added to their budgets and, though in the short run their consumption remains discretionary, in time some of them become necessities. Thus, in the short span of ten years of intense participation in the produce market, the subsistence requirements of the African peasantry changed significantly, as the following observations referring to successive points in time seem to suggest:

There is a steady increase in the demand for trade goods, of which the articles most in request are hoes, picks, cutlery, blankets, clothing, salt, beads, etc., with occasionally such luxuries as coffee, sugar, golden syrup, and corned beef. . . .⁵⁵

The natives' progress is becoming more marked each year. This does not apply to any great extent to requirements of articles of civilized manufacture, but of correspondence by post, railway travelling, cleanliness in dress and person. . . .⁵⁶

The large number of town and country stores catering for the native customer is a striking illustration of the increasing wants of the native. The stock-in-trade comprises agricultural implements . . . boots and shoes, ready-made clothing of all descriptions, hats, shirts, drapery, coffee, tea, jams, sugar, salt, flour, candles, paraffin, and such luxuries as golden syrup, cigarettes, confectionery and perfumery. . . .⁵⁷

Natives are noticeably dressing better, and on enquiry it is found that many of them demand better quality in suits, shirts, and boots than formerly.⁵⁸

There is amongst natives, an increasing demand for European medicines. . . .⁵⁹

That the natives are depending more and more on European goods to supply their wants is manifest by the increasing number of applications for general dealers' licences, in town and country. The class of goods stocked by Europeans for native trade formerly consisted of beads, blankets, limbo, and brass wire; this has now given place to ready-made clothing, woman's apparel, boots, bicycles, paraffin lamps, candles, cigarettes, sugar, coffee, tea, fish, tinned meat and other groceries, and there is besides a ready demand for farming implements and carpentering tools. . . .⁶⁰

In *periods of falling incomes*, on the other hand, while discretionary consumption tends to be cut, consumers resort to dissaving, to increas-

ing their supply of labour, and, in the case of self-employed producers, to a more intense use of the means of production in order to preserve their consumption of necessities. The protracted period of sustained demand for African produce and the participation in the money economy that it induced can thus be said to have performed the function of making such participation increasingly indispensable for the African population: should the sale of produce become uneconomic or impracticable, the African people would be compelled to sell their labour-time in order to satisfy their *subsistence* requirements.

Many of the articles mentioned in the above passages were substitutes for the products of the traditional economies. And in fact the non-agricultural productive activities of traditional African society soon succumbed to external competition.⁶¹ The main reasons for this were the superior quality and lower prices of capitalist manufactures and the fact that it was difficult for African craftsmen to obtain their *cash* requirements through the sale of non-agricultural goods within the peasant economy: trade had traditionally been a matter of barter, and the peasants were reluctant to pay cash for something that they could, if necessary, make themselves.⁶² Despite the fact that during the two World Wars, when capitalist manufactures were in short supply or altogether unavailable, there was a revival of the African handicraft industry,⁶³ the African peasantry underwent an 'unlearning process' whereby they gradually lost their ability to produce non-agricultural goods,⁶⁴ a tendency that also contributed to increasing their dependence upon the sale of agricultural produce or labour.

The process of growing African dependence on exchange with the capitalist sector tended to be cumulative. As cash payments became an essential part of African society, traditional transactions, such as marriage payments, began to assume a cash value,⁶⁵ further increasing the necessary character of participation in the money economy. And gradually, the spreading of missionary education became one of the most powerful factors in altering the nature of such participation. Not only did education (even of a merely religious kind, as it often was) change tastes and wants,⁶⁶ in addition, as wage employment became more and more a source of means of subsistence, expenditure on education also lost its discretionary nature, and was later to become one of the major expenditure items in African families' budgets (cf. p. 219).

(b) The tendency towards greater African dependence on exchange with the capitalist sector was matched by an upward tendency in the effort-price of African participation in the produce market. Available official estimates of acreage under cultivation, yields, and population point to two broad trends in African peasant agriculture during the first half of this century: a constant grain output *per capita* of the rural African population and a steady increase in the acreage under cultivation, also *per capita* of the rural African population.⁶⁷ These two trends taken together imply a steady increase in the effort-price of a given quantity of produce and therefore an upward tendency in the effort-price of African participation in the produce market.

A first point that has to be made in tracing the causes of the above tendency is that, at least prior to the late 1930s, it was not due to an abnormally high rate of population growth. Taking the Chief Native Commissioners' figures of the number of indigenous African males over

14 as a basis for the calculation of the rate of growth of the African population, we find that that rate remained roughly constant at 1.6 per cent per year between 1906 and 1936, it rose to 2.7 in the period 1936-46 and to 3.4 in the subsequent decade. Given the low density of population existing in the country as a whole at the turn of the century, we can assume that, before the late 1930s, falling yields per acre were not due to an abnormally high rate of population growth that forced the African peasantry to bring under cultivation increasingly inferior land.

The main causes of the trends in question must rather be traced to the long-term effects of the institutional framework that had been established at the beginning of the century. For one thing, the high rentals, dipping fees and stringent labour-clauses on European land occasioned a widespread movement of Africans into the less fertile lands of the Reserves. Moreover, with the development of capitalist agriculture, land values steadily appreciated and the labour situation improved. In consequence, the advantages of retaining African tenants were reduced in many instances since labour was more easily obtainable on the market and competition for grazing between African-owned and European-owned cattle on European farms intensified. European farmers became anxious to have their former tenants removed and, as farms were alienated, the African occupants were given notice and told to leave.⁶⁸ As a result, the proportion of the African population residing on Reserves rose from 54 per cent in 1909 to 59 per cent in 1914 and 64 per cent in 1922.⁶⁹

This shift of the African population into the Reserves was, owing to the inferior quality of land therein, a major cause of falling average yields in African agriculture. But other, less apparent, forces were also contributing to the tendency in question, an understanding of which presupposes an analysis of the pattern of surplus absorption in the peasant economy. Disregarding for the time being the problem of the terms of trade with the capitalist sector, the surplus is here defined as the difference between the aggregate net output (net, that is, of the means of production used up in the process in the peasant sector) and the means of subsistence consumed by the peasantry, both referred to a given period of time. For our purposes it is sufficient to distinguish three main forms of surplus absorption: discretionary consumption, socially necessary unproductive absorption, and productive investment. The significance of the *pattern* of surplus absorption lies in the fact that it determines the size of the surplus itself in subsequent periods. Thus, for example, the greater discretionary consumption, the faster the growth of future subsistence requirements and, other things being equal, the smaller the surplus in subsequent periods; the greater and the more 'efficient'⁷⁰ the productive absorption of the surplus, the greater, other things being equal, the size of future surpluses.

Bearing in mind previous observations, we may say that the imposition of white rule in Rhodesia had a contradictory effect on the surplus-generating capacity of the African peasantry. By generating a demand for their labour-time and produce, it tended to bring about an increase in peasant *per capita* output, though the limitations imposed on land use soon counteracted this tendency. At the same time, however, the development of capitalism tended to restrain the productive absorption of the surplus *within* the peasant sector. For one thing, much of the surplus was appropriated by the Europeans in the form of labour-services, taxes,

rents, etc. In the second place, the confrontation of a pre-industrial society, producing a limited range of goods, with the sophisticated consumption pattern of an industrial society (while it led to the above-mentioned increase in the productive exertion of the African peasantry) also tended, as we have seen, to foster discretionary consumption and therefore a rapid increase in African subsistence requirements. Lastly, the development of capitalism did not, in any great extent, reduce the insecurity of existence of the African peoples since it substituted market uncertainty for ecological uncertainty (which, of course, was only partially eliminated). As a consequence, the necessity of certain unproductive forms of surplus absorption which enhanced social cohesion was only marginally lessened.⁷¹

A substantial amount of productive investment was none the less carried out by the African peasantry during the first two decades of the present century. Africans bought wagons and carts for the transport of produce to the towns and mining centres, some invested in corn crushers and in water boreholes, though the latter were rather exceptional and to be found only among those engaged in market gardening near the towns and mining centres or under conditions of acute water scarcity.⁷² But by far the most prominent forms of productive investment were cattle and ploughs. In the period 1905–21 the number of African-owned cattle increased from 114,560 to 854,000 head, or at an average compound rate of 12.5 per cent per year; subsequently this rate fell drastically to 6 per cent in the period 1921–31 and to 1 per cent in the period 1931–45.⁷³ This rapid accumulation was partly traceable to the existence of traditional mechanisms of transformation of current surpluses into cattle⁷⁴ and to the role played by cattle in enhancing social cohesion. Equally important, however, was the conscious response of the African peasantry to the opportunities afforded by this form of accumulation for increasing their future incomes. For, with the introduction of the ox-drawn plough and the increased importance of transport, cattle had come to play a more significant productive role in African agriculture, and the development of capitalist agriculture was, as we shall see, steadily raising the market value of African-owned cattle. The Africans readily responded to these new opportunities by supplementing the above-mentioned traditional mechanisms of accumulation with improved methods of stock management, investment in dipping tanks, and purchase of imported cattle, breeding stock in particular.⁷⁵

The other major form of productive investment was the plough, the number of ploughs in use by Africans increasing from 440 in 1905 to 16,900 in 1921, to 53,500 in 1931, and to 133,000 in 1945.⁷⁶ The common characteristic of these two main forms of productive surplus absorption was their 'land-consuming bias'.⁷⁷ Given the general absence of population pressure on the land before the 1920s, this bias was fully justified by the factor-endowment of the peasant sector. In the long run, however, it tended to eliminate the relative abundance of land, a tendency that was already being promoted by the population movements into the Reserves discussed above. As we shall see this tendency was soon to materialize in an actual shortage of land which radically altered the position of the African peasantry *vis à vis* the capitalist sector.

In previous sections we have discussed the relationship between the supply of African labour and the development of capitalist agriculture, as

well as the role played by political mechanisms in the 'take-off' of the latter. The policy of vigorous encouragement of European agriculture pursued by the Government brought immediate and impressive results (cf. Table 4). Taking into account the fact that a considerable proportion (between four-fifths and nine-tenths, according to the season) of African grain production was not marketed, it can be stated that, in as far as grain supplies were concerned, the capitalist sector had become largely self-sufficient by 1915.

The immediate effect of the expansion of European maize production was a downward pressure on grain prices. The scanty available evidence suggests a decline in the price of maize in the order of 30-50 per cent between 1903-4 and 1911-12,⁷⁸ which by itself must have significantly raised the effort-price of African participation in the produce market. But

TABLE 4
COMPARATIVE GROWTH OF EUROPEAN AND AFRICAN AGRICULTURE, 1904-1921

	1904	1911	1915	1918	1921
European maize production:					
Total ('000 bags)	46	393	743	807	1,001
Retained for farm use ('000 bags)	n.a.	n.a.	142	149	194
African grain production					
Total ('000 bags)	2,151	2,190	2,161	2,495	2,630
External trade:					
Imports of maize ('000 bags)	50	17	44	37	162
Export of maize ('000 bags)	—	41	225	300	386
Cattle population:					
European-owned ('000 head)	30	164	395	600	905
African-owned ('000 head)	105	330	446	610	845
External trade:					
Cattle imports ('000 head)	n a	3	7	1	1
Meat imports ('000 lb)	1,715	669	151	28	22
Cattle exports ('000 head)	—	—	—	23	9

Notes: Crops are shown under the year in which they were harvested. Production figures for 1915, 1918, and 1921 are averages for three seasons. Figures of African-owned cattle and meats imports for 1904 are annual averages for the two years ended 31.3.1905.

Sources: *Censuses of the European Population, 1904 and 1911. Official Yearbooks*, op. cit. 1924 and 1932; *Annual Reports of the Chief Native Commissioners, Annual Reports of the Controller of Customs*.

the fall in prices received by the African peasantry was even more drastic than the above decline would indicate. For only 30 per cent of the land assigned to Africans—as against 75 per cent of that alienated to Europeans—was within 25 miles from a railway line (and therefore also from towns and mining centres),⁷⁹ while it was generally recognized that grain crops could not bear the cost of more than 15 miles of ox-wagon transport when railway costs were to be added.⁸⁰ In consequence, as the development of capitalist agriculture occasioned the migration of the African peasantry into the Reserves, not only were the land resources available to Africans reduced, but their ability to compete on the grain market was progressively curtailed.

The development of capitalist agriculture did, however, have some positive effects on African agriculture which, for a while, counteracted the above tendency towards a rising effort-price of African participation in the produce market. Since the stock of European-owned cattle was largely

built upon cattle purchased from Africans and upgraded by the use of imported bulls,⁸¹ the growth of European mixed farming and cattle ranching generated a demand for African-owned cattle whose price steadily advanced from £1-£2 per head around 1905-06 to £4-£7 in 1909 and to £9 in 1918.⁸² However, this counteracting tendency was necessarily of a temporary nature: after a time the natural increase in European-owned cattle would become large enough to supply the whole of market demand and the relationship between European and African agriculture would become an exclusively competitive one.

It is probable that this situation would have been reached some time in the mid-1910s were it not for the boom in external demand for Rhodesian cattle and maize brought about by World War I and lasting through 1920. During this period the downward trend in maize prices was reversed, and African-owned cattle came in great demand to supply the export market. The war and post-war boom thus delayed the full materialization of the effects of the development of capitalist agriculture upon the effort-price of African participation in the produce market. As we shall presently see, however, it also made such materialization all the more sudden and drastic in its impact when it came to an end in 1921.

IV

The various tendencies analysed in the foregoing section were precipitated by the slump in cattle and maize prices of 1921-23 which radically altered the position of the African peasantry in the structure of the Rhodesian economy. The extent to which the slump affected cash earnings from sale of produce can be gauged from the following data: in 1920 African sales of grain to European traders were estimated at 198,000 bags at 10s. per bag; in 1921, the average price fell to approximately 5s. per bag at which price trade became uneconomic in many districts, with the result that, notwithstanding a plentiful harvest, only 43,600 bags were purchased from Africans.⁸³ A similar reduction occurred in receipts from cattle sales: though no figures are available for 1920, it was estimated that at least 20,000 head of cattle were sold by Africans in 1919 at prices in the order of £7-£8; in 1921, the demand for African stock 'diminished' and in 1922 'practically ceased', a head of cattle being 'worth little more than a sheep'.⁸⁴ In 1924 there was a recovery followed by a short-lived boom that lasted until 1929 when prices collapsed again.

The immediate effect of the drastic increase in the effort-price of African participation in the produce market brought about by these slumps was a sharp increase in African participation in the labour market (cf. Fig. 1). As a result, the relative importance of wage-employment and sale of produce as sources of African cash earnings was reversed: while the sale of produce had accounted for some 70 per cent of the total cash earnings of the indigenous African population at the beginning of the present century (cf. fn. 30) it accounted for less than 20 per cent of such earnings in 1932.⁸⁵ It is important to note that *this change cannot be considered as merely a cyclical phenomenon. It rather was an 'irreversible' change in the sense that subsequent recoveries could not restore the previous position of the African peasantry vis-à-vis the capitalist economy.* In order to understand this it is necessary to analyse the short- and long-term impact of the slumps in question on the economy of the peasant sector.

Both slumps were followed by an acceleration in the movement of

Africans into the Reserves.⁸⁶ One reason for this acceleration was that the financial stringency in which the slumps had thrown the African peasantry⁸⁷ had greatly diminished their ability to meet the various charges to which they were subject outside the Reserves. Moreover, since the fall in produce prices had made participation in the labour market the more economic way for many Africans to meet their cash requirements, the payment of such charges in order to reside close to the markets and lines of communication had become less justified than previously.

Once the migration had taken place, the future ability of the Africans who had migrated to obtain their cash requirements through the sale of produce was, of course, jeopardized. More important still, these migrations into the Reserves precipitated the appearance of land shortages therein: in 1926 it was observed that 'several Reserves' were becoming 'overcrowded',⁸⁸ in 1928 'general overstocking' was reported, especially from Matabeleland;⁸⁹ and in 1932 the first symptoms of 'a vicious and expanding circle of destruction' were detected:

Already the first signs of [the possible deterioration of the land in native areas from cumulative evils in the shape of soil erosion, the drying up of springs, the extirpation of valuable pasture grasses through overstocking, and the exhaustion of fertility] are discernible in some of our more congested native reserves, and it is plain that we must take more positive control, if we are to see an increase, and not a reduction in the life-supporting capacity of our native areas.⁹⁰

The 'cumulative evils' of population pressure on the land soon materialized: in an attempt to maintain output, land began to be brought back into cultivation before the soil had a chance to regenerate fully and grazing areas were destroyed as the number of stock increased.⁹¹ As a result of this 'expanding circle of destruction', supplemented after the late 1930s by the acceleration in population growth, a general shortage of land developed in the African areas: by 1943 the Department of Native Agriculture estimated that out of 98 Reserves 62 were overpopulated (19 more than 100 per cent overpopulated) and 50 were overstocked. Several of the remaining areas were either in, or dangerously close to, the tsetse fly zones and could not safely carry cattle.⁹²

As the African peasantry began to be affected by a shortage of land, the production of a marketable surplus on their part tended to become 'impossible', not just 'uneconomic', and a return to the *status quo ante* in relative produce prices would not restore their previous ability to participate in the money economy through the sale of produce. It is mainly for this reason that the enhanced importance of wage employment as a source of African cash earnings after the 1920s must be considered as largely 'irreversible' rather than 'cyclical'. It may be argued, however, that a land shortage is nothing more than a structural disequilibrium between labour, capital and land, and that a 'land-saving bias' in accumulation can in due course eliminate such disequilibrium. This is certainly true and we must therefore analyse the qualitative and quantitative characteristics of peasant surplus absorption in the 1920s and 1930s in order to trace the causes of the persistence, indeed aggravation of the land shortage.

The pattern of peasant productive investment did alter with the appearance of population pressure on the land. In the 1920s the rate of growth of African-owned cattle fell to half what it had been in the previous 15

years (cf. p. 214) while greater attention began to be paid to the quality of herds as witnessed by the increase in the number of grade bulls owned by Africans.⁹³ There were also attempts to counteract the emerging land shortage by substituting wheeled vehicles for the traditional sleighs which caused soil erosion besides making marketing from distant areas uneconomic.⁹⁴ In the 1930s there occurred a further shift in a land-saving direction: the rate of growth of African-owned cattle fell drastically (it averaged only 1 per cent per year in the period 1931–45) and land began to be manured, a practice that became 'common' by 1940.⁹⁵

However, these changes were not significant enough to affect the trend towards a general land shortage. Particularly striking was the absence of any major shift from production of marketable surpluses of foodstuff (mainly cattle and grain) to the production of purely commercial crops such as tobacco (which was particularly well suited to the soil and climatic conditions of Rhodesia). Given the more favourable market conditions faced by, and the lesser land requirements of, tobacco production relatively to maize and cattle, a shift of this kind could have gone a long way in counteracting the tendency towards a sharply increasing effort-price of African participation in the produce market.

This partial failure of the African peasantry to adjust production patterns to the market conditions and factor endowment must be traced in the first place to the worsening of their terms of trade with the capitalist sector during the 1921–23 slump and the Great Depression.⁹⁶ This worsening, on the one hand, reduced the means available to the peasantry to carry out the investment which must normally accompany innovation. On the other hand, when little surplus is produced, production is almost entirely directed to satisfying short-term subsistence requirements. Innovation in crops and techniques may therefore be highly hazardous as they divert labour and/or land from the production of means of subsistence, leaving no margin to meet a possible risk of starvation should something go wrong with their commercial crops or should a bad harvest occur before the full effects of land-saving innovations have materialized.⁹⁷ In other words, while before the 1920s the absence of a land shortage and the good prices of grain and cattle discouraged, respectively, a shift towards land-saving patterns of investment and the cultivation of commercial crops,⁹⁸ after the slump of the early 1920s (and especially in the 1930s) these changes were impeded by the smallness of the surplus.

There was, however, another factor at work. Low wages and lack of security in the capitalist sector maintained the African worker's interest in the security afforded by membership of a rural-based kinship group; at the same time, fading opportunities for African participation in the produce market made the peasantry at large more reliant on wage-worker's remittances for their cash requirements. There was therefore little incentive for all involved to break up traditional structures which in some ways tended to hamper innovation in techniques and patterns of production. For example, in the 1930s 'centralization' of arable land came to be considered as a measure necessary to prevent haphazard interspersing of arable and grazing land which was one of the main causes of soil erosion. This innovation, however, made it increasingly difficult to provide land for a growing family in the vicinity of the parents' kraal, with the result that either the family land holdings had to be fragmented, or the family itself.⁹⁹ As the latter alternative would undermine social cohesion, centra-

lization was resisted or, if implemented, it led to excessive fragmentation of holdings and further deterioration in land fertility.¹⁰⁰

These factors were preventing a radical reorientation of peasant production patterns in the face of a growing land shortage, which in the late 1930s began to be made more acute by an acceleration in population growth. Moreover, the process tended to become cumulative. For one thing, as the surplus-generating capacity of the African peasantry began to fade, a tendency developed among them to sell more of their crops than they could spare in an attempt to maintain their consumption of purchased necessities. They then had to buy food at enhanced prices from capitalist producers before the next crop was ready,¹⁰¹—presumably by parting with their accumulated wealth (mainly livestock) or by working for wages—thus further reducing their future surplus-generating capacity. The urge to maintain subsistence consumption also led to the degeneration of agricultural practices noted above and to the persistence of types of productive investment and innovations whose efficiency had been diminished by the changed conditions facing production. For example, the substitution of maize for traditional crops (millets, ground-nuts, sweet potatoes), which were less land-consuming but which had become more difficult to dispose of on the market, gained momentum in the 1930s, probably relieving the shortage of cash income in the short-run but leading to faster soil erosion in the long-run.¹⁰² Similarly, as participation in the money economy through the sale of produce became increasingly uneconomic or altogether impossible, the plough acquired new importance as a labour-saving device necessary to release male-labour for wage employment. It thus remained one of the main forms of investment notwithstanding its land-consuming bias which could only worsen the land shortage.¹⁰³ Equally important was the fact that, since male labour was traditionally in charge of management and capital formation, the steady increase after 1920 in the proportion of indigenous males in wage employment (cf. Fig. 1) became a factor hampering the adjustment of techniques of production and composition of output in peasant agriculture to the changing factor endowment and market conditions.¹⁰⁴

In the late 1930s a major reorientation in the pattern of surplus absorption in the peasant sector did occur. A considerable amount of labour-time and expenditure began to be allocated to education. The interest of the rural African people (with exceptions among the youth) in education had previously been lukewarm, but with the deterioration in the income-generating capacity of the peasant sector, education (owing to the advantages it conferred in the wage economy) must have become more and more a 'necessary' rather than a 'discretionary' expenditure item. The first sign of a changed attitude was a dramatic increase in school attendance, soon followed by an equally dramatic increase in enrolment: average attendance in mission primary schools, after stagnating at around 45,000 for over a decade, shot up from 46,000 in 1936 to over 86,000 in 1943, and to 140,000 in 1947, while enrolment rose from 87,000 in 1936 to 117,000 in 1943, and to almost 180,000 in 1947.¹⁰⁵ Whatever its long-term political and economic implications, this 'rush' for education, by diverting a significant proportion of the labour-time and financial resources of the African people away from investment in agriculture, added new and probably decisive momentum to the process of their proletarianization.

Throughout the period under consideration the Government continued to play an important role in undermining the African peasantry's ability to participate in the produce market. To be sure, Government policy towards African agriculture was modified in the late 1920s. In 1926 the Government appointed an 'Agriculturalist for the Instruction of Natives' and three years later it began to pursue the policy of centralization of arable land mentioned above. In conjunction with this policy the Government subsequently introduced other measures meant to check the degeneration of agricultural practices; these included extension services, irrigation schemes, culling of cattle and destocking, voluntary at first but compulsory after the war. Yet even official reports often admitted that these schemes failed to have any significant impact on the trends that we have been analysing. This failure can be partly traced to the already discussed difficulties of changing techniques and patterns of production in the peasant sector; but the main reason was the smallness of the financial resources allocated by the Government to African agriculture: approximately one-fortieth, in the period 1939-45, of what was being spent on European agriculture.¹⁰⁶ Moreover, Africans, quite justifiably, feared that 'any success [in raising land productivity] will be a reason for depriving them of a portion of the Reserves set aside for them or a ground for refusing their demands, which are insistent, for the extension of the Reserves.'¹⁰⁷ For this reason they opposed Government action in the peasant sector, thus contributing to its failure.

That African suspicions were fully justified is shown by the fact that the land resources available to the African people were further restricted in this period. Though in 1931 they were formally increased through the allocation of previously unassigned land, this *de jure* increase was not matched by a *de facto* increase since Africans were already residing on the land newly assigned to them. In addition, the *de jure* increase was accompanied by the introduction of the Land Apportionment Act (1931), which came to bar Africans from purchasing land outside designated areas at a time when the shortage of land in the Reserves was likely to induce them to enter the land market in greater numbers. More important still, population movements from the European to African areas, due to the factors discussed earlier on and increasingly also to Government-organized expulsions, continued to reduce the *de facto* availability of land to Africans: 50,000 Africans moved to the Reserves between 1931 and 1941, and at least as many between 1941 and 1945.¹⁰⁸

Government action in other spheres was equally *graphic*. With the decline in the importance of the African peasantry as suppliers of food-stuff to the capitalist sector, and with the rise of the European farmers to a position of hegemony among the ruling classes, the earlier reluctance of the Government to discriminate against African marketed produce largely disappeared. Thus in the early 1930s the Government monopolized the marketing of locally produced maize and instituted a two-price system which protected the small European producer and discriminated against the African,¹⁰⁹ and similar discriminatory practices were introduced in the marketing of cattle.¹¹⁰ These formal checks on African competition in the produce market simply supplemented what had been and still was the main discriminatory device: the distance of African lands from the consumption centres and the lines of communication. The development of motor transport did not significantly change the situation

in this respect, for unless an African area happened to be in the track of a main road between European areas there was no provision for the construction of a road to its boundaries. As a consequence, most African areas had to rely on tracks which were unsuitable at any time for motor transport.¹¹¹

All this having been said, it is probable that political mechanisms were progressively losing their *dominant* role in undermining the peasantry's ability to participate in the produce market and in strengthening the competitive position of European agriculture. For, once capitalist agriculture has overcome the initial difficulties related to its competitive weakness in the produce market and to its low productivity relatively to the market wage rate, market forces themselves tend to widen the gap between productivities in peasant and capitalist agriculture. The main reason for this is that capitalist producers in reinvesting surpluses tend to choose those techniques which increase the surplus itself at some future date rather than current output as the peasantry can be expected to do.¹¹² In time this leads to a higher rate of accumulation¹¹³ and faster growth of land and/or labour productivity in the capitalist sector. In the second place, capitalist agriculture is not subject to the constraints which we have seen to hamper certain types of innovation in peasant agriculture. It is therefore free—and indeed compelled under the pressure of competition—to innovate as trends in market conditions and factor endowment change. For these reasons we can assume that the contraction of the surplus-generating capacity of the African peasantry was matched by a steady increase in the surplus-generating capacity of capitalist agriculture, something that progressively reduced the importance of political mechanisms in deepening the dualism of the Rhodesian economy.

V

We are now in a position to explain why, after the early 1920s, African responsiveness to wage-employment opportunities increased continuously, irrespective of whether real wages were rising, falling or remaining constant. Our analysis has shown that this tendency must be traced to the increasingly 'necessary' character of African participation in the money economy and to the steady increase in the relative effort-price of participation in the produce market which was in turn the result of the development of capitalist agriculture and of the pattern of surplus absorption in the peasant sector. The significance of the 1920s is that the slumps of 1921 and 1929 precipitated a qualitative change in the economic position of the African peasantry: thereafter African participation in the labour market ceased to be largely 'discretionary', i.e. a way of transforming *surplus* labour-time which could not be absorbed economically in agricultural production into a surplus of commodities (discretionary consumption, productive and unproductive accumulation), and became the normal and only way in which a growing section of the peasantry could obtain a significant proportion of their means of subsistence.¹¹⁴ To put it differently, the disguised unemployment of the peasant sector was no longer due to a lack of incentives to apply unutilized labour-time to agricultural production *within* the peasant sector but to a structural disequilibrium between means of production and subsistence requirements of the peasantry.

An analysis of the supply of African labour in historical perspective

has thus invalidated Barber's interpretation of the development of the African wage-labour force in Rhodesia. For one thing, dualism in Rhodesia (i.e. the technological, economic and political distance between the two races) was less an 'original state', progressively *reduced* by market forces, than it was the outcome of the development of capitalism itself.¹¹⁵ Related to this oversight is Barber's failure to see that market forces did not *ab initio* favour capitalist development. Real wages remained at a level which promoted capitalist accumulation not because of the forces of supply and demand, but because of politico-economic mechanisms that ensured the '*desired*' supply at the '*desired*' wage rate. Before the determination of wage rates and rates of accumulation could be 'safely' left to market forces, the Rhodesian capitalist system had to undergo the process of 'primary accumulation', a concept that has no place in Barber's analysis and to which Lewis refers to in an off-hand way.¹¹⁶

Broadly speaking, 'primary accumulation' can be defined as a process in which non-market mechanisms predominate and through which the gap between productivity in the capitalist sector and productivity in the non-capitalist sector is widened. The process is completed when the gap is so wide that producers in the latter sector are prepared to sell their labour-time 'spontaneously' at whatever wage-rate is consistent with steady accumulation in the capitalist sector. Once this situation has been attained, the Lewis postulate of the predominance of market mechanisms in the re-allocation of labour from the non-capitalist to the capitalist sector of the economy becomes realistic, though political mechanisms may continue to play a subsidiary role. The Lewis model, like any other theoretical model, must therefore be situated historically. In the case of Rhodesia, our analysis suggests that it begins to be relevant in the 1920s when the capitalist sector had become 'self contained' and the peasants' independence of wage-employment was being irreversibly undermined.

We must now determine whether the model retained its validity after World War II. We have seen that towards the end of the 1940s African real wages began to rise and that Barber's interpretation of this phenomenon is no more satisfactory than his explanation of why wages did not

TABLE 5
TRENDS IN AFRICAN WAGE EARNINGS AND EMPLOYMENT: 1946-61

	1946	1951	1956	1961
1. Total number of Africans in wage employment ('000s)	376	527	602	628
2. Proportion of indigenous African males in wage employment (per cent)	48.0	61.0	57.5	55.5
3. Average annual earnings of African employees (£)	26	43	75	102
4. European cost of living index (Oct. 1949 = 100)	86	116	135	156
5. African real wages: (3)/(4)	30	38	56	65

Notes and sources: The European cost of living index is taken as a rough approximation to changes in the African cost of living, as no index of the latter is available prior to 1960. The data are derived from: *The National Income and Social Accounts of Southern Rhodesia, 1946-51*; *Economic and Statistical Bulletin of Southern Rhodesia*, February 7, 1952; *Monthly Digest of Statistics*, February, 1966; *Censuses of the European population. Reports of the Chief Native Commissioner and Secretary for Internal Affairs.*

rise in earlier times. The exceptionally rapid growth of the demand for African labour in the late 1940s and early 1950s (the number of Africans in wage employment rising at an average compound rate of almost 7 per cent per year in the period 1946–51) was certainly a major factor in pushing up real wages. Yet this was no new phenomenon; before World War II, also, large increases in the demand for labour, after periods of falling real wages, normally led to increases in the latter to restore them to the 'single worker subsistence level'. This was the case, for example, in 1908–11 and 1924–29. What was new in the post-war situation was that real wages continued to rise even when the rate of growth of the demand for labour fell—as it did in the mid-1950s—causing a decline in the proportion of indigenous African males in wage employment (cf. Table 5). This increase must obviously be traced to factors other than a situation of 'quasi-full employment'.¹¹⁷

Available evidence suggests that the rise in average African real wages, especially in the 1950s, was mainly due to the 'upgrading' of a section of the African wage labour force. The rapid growth of secondary and tertiary industries, which had become the leading sectors of the Rhodesian economy, created a need for greater labour stabilization. For these sectors required a labour force with certain skills which, though simple, could not be imparted under conditions of high turnover.¹¹⁸ The demand for semi-skilled labour was further enhanced by the spreading of mechanization and automation to the Rhodesian mining and manufacturing industries favoured by technological development in the metropolitan countries as well as by rapidly increasing concentration of production in Rhodesia itself.¹¹⁹ But stabilization of African labour presupposed the abandonment of the tradition of the subsistence wage (still obtaining after World War II) whereby the level of African wages was customarily fixed so as to allow only the subsistence of *single* men.¹²⁰ The persistence of this tradition meant that wage workers continued to rely on the tribal economy for the support of their families, and of themselves during their old age, sickness and unemployment. Participation in the labour market thus left the worker's obligations and duties to his rural kinsmen and his general involvement in the tribal social system unchanged so as to retain his cultivation rights and to be able to claim support and succour when necessary.¹²¹ The creation of a stabilized wage labour force which would not periodically move to and from the peasant sector required, among other things, a level of African wages and living conditions in the capitalist sector that would provide Africans with some security not only during their working life but also during their old age, and above all that would enable them to support their families outside the peasant sector. That is to say, 'stabilized labour' commanded a premium determined by the difference between the cost of the means of subsistence of single men during their working life in wage employment and the cost of the means of subsistence of the worker's family over his 'life cycle'.

Large enterprises—especially those operating in secondary and tertiary industries—which could introduce labour-saving methods of production began to find it profitable to pay the above-mentioned premium because higher wages were more than compensated by the higher productivity of a stabilized labour force. It was in fact in those sectors in which stabilization mattered most (manufacturing, transport and communication) that after 1954 most of the increase in real wages was concentrated (cf Table 6).

In agriculture, on the other hand, where stabilization mattered least, the increase in money wages was just sufficient to compensate for the rise in costs of living.

The post-war trend of rising wages was not unrelated to the pre-war trends in the economic position of the African population which we have analysed in the previous sections. The 'rush' for education of the late 1930s and early 1940s, for example, was certainly a factor which facilitated the subsequent politicization of the African masses. After the war, African workers showed an awareness of their increasingly proletarian status, something that led them to seek an improvement of their living conditions *within the capitalist sector*, i.e. *qua* proletarians rather than *qua* migrant peasants. With this new consciousness came a wave of strikes that made the late 1940s a period of African labour unrest of unprecedented intensity

TABLE 6

(a) AFRICANS IN WAGE EMPLOYMENT, AND (b) AVERAGE ANNUAL EARNINGS: 1954-62

		1954	1956	1958	1960	1962	Average rate of growth 1954-62 (%)
Agriculture	(a) ('000)	218.0	228.0	230.0	240.0	243.9	
	(b) (£)	48	52	57	59	61	3.1
Domestic service	(a) ('000)	76.1	85.4	90.9	94.1	95.2	
	(b) (£)	71	81	88	94	102	4.6
Mining and Quarrying	(a) ('000)	62.4	60.9	57.1	52.3	44.1	
	(b) (£)	83	97	106	115	124	5.1
Transport and Communications	(a) ('000)	12.1	13.7	15.1	16.0	16.6	
	(b) (£)	94	114	148	166	209	10.5
Manufacturing	(a) ('000)	62.5	70.0	72.4	75.0	73.4	
	(b) (£)	65	81	108	125	164	10.8
All Sectors	(a) ('000)	555.0	602.0	628.0	640.0	616.0	
	(b) (£)	64	75	88	94	109	6.9
European cost of living index Jan, 1962 = 100)		80.6	85.5	91.2	96.0	100.8	2.8

Source. *Monthly Digest of Statistics*, February 1966.

and scale. This phenomenon, developing at a time when a manufacturing capitalist class with an interest in labour stabilization and in the expansion of the internal market was temporarily playing a hegemonic role in Rhodesian society, induced the Government to raise basic African wages and to introduce a system of grading in industry. And this contributed to the general increase in African real wages.

Our assumption that the main factors behind the post-war rise in real wages were the qualitatively new man-power requirements of capitalist production and, secondarily, the greater African militancy in wage bargaining does not of course exclude the possibility that mechanization, automation and increased concentration of production might have been partly due to rising wages. This was in all likelihood the case in the gold-mining industry and among large-scale European maize producers. What the assumption does imply is that the qualitatively new manpower requirements of the capitalist sector (a factor largely exogenous to the situation in the Rhodesian labour market), rather than a shortage of

African labour, was the *dominant* factor in the 'rising wages-mechanization spiral' of the 1950s.

But if the relationship between shortage of labour, wages and mechanization had changed with respect to the pre-war period, the behaviour of the demand for African labour had also changed. A comparison of such behaviour during the slump of 1921-23 and during the recession of the late 1950s and early 1960s will illustrate the change. During the 1921-23 slump the growth of African wage employment proceeded at a sustained rate (cf. Fig. 1). The main reason for this phenomenon was the predominance of competitive market structures in the Rhodesian economy of the time. For the presence of competitive pricing and investment behaviour in most sectors ensured both a high 'intersectoral mobility of capital' and a relative independence of the rate of investment from the current absorptive capacity of the market.

'Intersectoral mobility of capital' is here defined as the ease with which capital moves to and from branches of production in response to changes in relative profitabilities, and it is assumed to depend mainly on the financial and entrepreneurial 'entrance requirements' of the various branches of production. In 1921-23, the competitive pricing behaviour of capitalist producers led to the drastic fall in grain and cattle prices referred to in section IV. The relative profitability of farming geared to these chief staples was consequently reduced, and, given the smallness of the above mentioned 'entrance requirements', there occurred the development of other branches of production which used (either as intermediary products or as foodstuff for their labour force) these staples as inputs. In this way the slump led to the establishment or expansion of various industries (dairy industry, pig industry, tobacco cultivation, gold mining) which contributed to sustain the demand for labour.¹²²

As noted, the other implication of the predominance of competitive market structures in the Rhodesian economy was the relative independence of the rate of accumulation from the current absorptive capacity of the market. Despite the depression, European farmers showed 'a more than wanted activity in the way of permanent improvements and development. Labour was exceptionally abundant and the normal work being largely in abeyance, the opportunity was largely taken of making bricks, building houses, sheds, dipping tanks, kraals and stockyards, constructing roads, dams, canals and silos, fencing, sinking wells, clearing scrub, and in other ways preparing for the better seasons which are confidently awaited.'¹²³ That is to say, sanguine expectations, a desire to strengthen their long-term competitive position, and the exceptional abundance of labour (itself a result, as we have seen, of the slump in produce prices) induced European farmers to reallocate labour from current production to capital formation, thus sustaining the demand for African labour.

The essential characteristics of a self-regulating competitive capitalism were thus present in pre-war Rhodesia, and this is an additional reason for taking the Lewis model as a rough approximation to the operation of the Rhodesian economy during the late 1920s and the 1930s.¹²⁴ By the late 1940s, however, the structure of the Rhodesian economy had altered radically. Foreign controlled oligopolies, characterized by considerable 'international mobility', had come to dominate important sectors of the economy (mining and secondary industries),¹²⁵ while the financial and entrepreneurial 'entrance requirements' in most branches of production

had greatly increased. As a consequence, prices had lost much of their downwards flexibility and even when changes in relative profitabilities did occur little intersectoral mobility of capital could be expected. Moreover, the greater calculating rationality of the large oligopolies relatively to the atomistic producers of earlier times implied a greater dependence of the rate of accumulation upon the absorptive capacity of the market.¹²⁶ For these reasons the recession of the late 1950s did not lead to structural changes that could sustain the rate of accumulation and the demand for labour. It caused instead a fall in both rates and an acceleration in the outflow of investment income.¹²⁷

Equally important was the fact that secondary industries *producing mainly for the internal market* had assumed a leading role in the Rhodesian economy, thus making the extremely unequal distribution of income a major constraint on accumulation in the capitalist sector. The acceleration in the growth of the demand for labour that was necessary for the absorption of a growing proportion of the African labour force into wage-employment came, therefore, to depend not only on structural changes in the economy which, as we have seen, market forces were ill suited to promote, but also on changes in the power structure of Rhodesian society.¹²⁸

The problems of capitalist accumulation which we have just discussed have no place in Lewis's theory of development. In his model all profits are automatically reinvested in productive capacity and, in addition, they are reinvested in such a way as to 'widen' capital, i.e. to create new jobs rather than to increase the productivity of those who already have jobs. Neither assumption is, according to our observations, valid in the Rhodesian context of the 1950s and 1960s. Investment tended to 'deepen' capital (largely irrespective of the situation in the labour market) and, as the limits of growth within the existing politico-economic framework were approached, reinvestible surpluses were either exported or absorbed unproductively or not produced at all.

In conclusion, the historical relevance of the Lewis model to the Rhodesian experience is limited to a period of roughly 20 years, i.e. from the mid 1920s to the mid-1940s: before the 1920s supplies of labour were in no sense 'unlimited'; after World War II, though labour supplies could be said to be 'unlimited' in Lewis's sense, the capitalist economy had become structurally incapable of absorbing them.

Before we close our discussion we may well ask how was it possible for Barber to misinterpret so utterly the process whereby an African wage labour force was brought into being in Rhodesia. For Barber was not unaware of the two relationships which we have seen to be necessary for a proper understanding of the above-mentioned process. Thus he recognized that:

(a) Participation in the labour market depends not only on the level of real wages but also on the relative effort-price of participation in the produce market and that it is possible 'that population pressure may so intensify that the natural growth in numbers can no longer be absorbed on the land without reduction in *per capita* product. Should this occur, the African might be denied the option of dividing his time between the money and the indigenous economies. Instead he may be forced to accept whatever wage terms were offered in the money economy'; and

(b) 'If an African labour force is to be stabilised in wage employment and its productivity there increased, it may be necessary for the employer in the money economy to break from the traditional low wage pattern of the past. The price which he must expect to pay for a stable labour force is a real wage sufficient to support the entire indigenous family at a standard which would make it attractive to grow roots in the money economy. . . .'¹²⁹

Yet he makes no use of these assumptions in his analysis of the past and considers them as possibilities which may become relevant in the future. Thus arbitrary rejection of assumptions enables him to advance a mystifying picture of capitalist development in Rhodesia.

In this, Barber exemplifies the ideological bent of the anti-historical approach which is the essence of modern economics. For in economics assumptions need not be historically relevant. In fact, they are often plainly untrue and recognized as such. Historical processes fall into the background and are summarized by statistical series of *ex-post* data, the 'stylized facts' as they are sometimes called, which by themselves reveal nothing about causation. Thus, all that Barber takes from the complex historical process which we have been analysing are a series of real wages and a series of rates of African participation in the labour market. Causal relations, on the other hand, are not derived from historical analysis, but are imposed from without, that is, through *a priori* analysis: and a set of assumptions which yields the 'stylized facts' is held to have explanatory value, irrespective of its historical relevance. But since there will normally be many such sets, this methodology leaves room for considerable arbitrariness of choice and therefore for mystifications of all kinds. In view of this, the low scientific standards attained by modern 'development economics' and, for that matter, by economics in general should surprise nobody.

1. *Economic Development with Unlimited Supplies of Labour* (Manchester School, 1954).

2. The difference in real incomes is postulated to be necessary in order to overcome the 'psychological costs' involved in the change to the more regimented environment of the capitalist sector and to offset differences in the cost of living.

3. *The Economy of British Central Africa* (London, 1961), p. 93.

4. Loc. cit.

5. Loc. cit.

6. Op. cit., p. 46.

7. Op. cit., pp. 212-14

8. Op. cit., p. 208.

9. Op. cit., pp. 186-87.

10. Op. cit., pp. 216-18.

11. The 'prodding from the tax collector' quoted above is seen by Barber as a device necessary to induce the Africans to seek their own interest.

12. On the existence of such shortages official reports were unanimous and public debate was almost entirely focused on the problems created by them. Cf., for example, P. Mason, *The Birth of a Dilemma. the conquest and settlement of Rhodesia* (London, 1958), p. 219.

13. All available evidence suggests that, after the mid-1950s, the situation in the Rhodesian labour market, far from being one of 'quasi-full-employment', was for the first time becoming one of *open* African (and European) unemployment. The situation began to cause concern in 1958 (*Memorandum on Unemployment in S. Rhodesia and Policy to Eliminate It*, by G. E. Stent, Adviser to the Labour Department, Salisbury, February 1959) and led to the passing of the Foreign Migratory Labour Act (1958), which made it illegal for labour from non-federal territories to seek employment in

the main urban areas of S. Rhodesia. This was the first time in the history of S. Rhodesia that the Government took steps to discourage the inflow of foreign migrant workers

14. In 1898 the Administrator reported that African wages on mines had risen from 5s.-10s. to 15s.-30s. a month. In 1902 the average African wage rate on mines (rations apart) stood at 38s. 6d. and in 1903 it had further risen to 44s., the range of wages being 30s.-80s. Figures taken from *Ninth Annual Report of the Chamber of Mines of Rhodesia*, for the year ended 31.3.1904; *Report of the Chief Native Commissioner* (henceforth, C.N.C.), *Matabeleland*, for the year ended 31.3.1904.

15. I shall discuss the consequences of the 1903-04 crisis in a study, now in preparation, on Rhodesian Economic Development, 1890-1962. The best available account of the 1903-04 crisis and of its implications is given in I. F. Hone, *Southern Rhodesia* (London, 1909).

16. In 1903 the Rhodesian Native Labour Board was established with the aid of Government funds in order to centralize and co-ordinate the recruitment of labour. Competition among employers was further restricted by the promulgation of a Pass Law which regulated the mobility of African labour *within* the capitalist sector as well as between the capitalist and the peasant sectors.

17. 'Factors in the Determination of Wage Rates in Central Africa,' *Human Problems in British Central Africa*, XXVIII, December, 1960.

18. The quotation is from M. Dobb, *Studies in the Development of Capitalism* (London, 1963), p. 274.

19. *Report of the Administrator*, for the two years ended 31.3.1904.

20. Hone, *op. cit.*, chapter 12.

21. *Annual Reports of the C.N.C. and Annual Reports of the Director of Agriculture*.

22. *Ibidem*.

23. The Shona were cultivators rather than pastoralists. Their principal crop was finger millet (*Eleusine sp.*) and they grew many varieties of vegetables and fruit. Game and fish were also important items in their diet. Cattle were allegedly not killed for food (except in periods of necessity) but for ritual purposes. However, ritual did not prevent the people from enjoying their cattle as items of food as well as objects of ritual, and ritual killings were in all likelihood spaced out so that the people had a regular diet of beef. Non-agricultural productive activities included basket-making, wood-carving, weaving and net-making from bark-fibre, mat-making, pottery, and iron work for the manufacture of agricultural implements, knives and spears.

Social and economic differentiations were very limited compared to those obtaining in other African pre-colonial social formations. Every adult member was entitled to land (which was abundant) in amounts sufficient for his and his family's subsistence. Membership of a village also ensured emergency allotments of food from headmen and chiefs and gifts from kin in case of need. Division of labour was more developed *within* than *among* productive units (the families). All that is embraced in the term 'housekeeping' were peculiarly feminine occupations. The building of houses and gran stores, weaving, net making, iron work, breaking up of new land, hunting and the charge of livestock, came within a man's sphere of work. The cultivation of land, sowing, weeding, reaping and threshing were jointly performed by the two sexes, though with a probable predominance of female labour.

A significant share of the surplus produced by the Shona was appropriated by the Ndebele. The form of appropriation varied from those tribes who had been made subject to the Ndebele State and those who had not, but who were exposed to Ndebele raids: in the case of the former the appropriation was in the form of regular payments of tribute; in the case of the latter the appropriation had not been institutionalized and was made through raids. Some Shona tribes lay completely outside the Ndebele range of activities and were therefore subject neither to tribute nor to raids.

The Ndebele people had a much more differentiated system from both economic and social points of view, being divided into castes which arose as a result of the assimilation of conquered peoples. The ruler of the Ndebele State was primarily the commander of the armies and his authority depended upon the control of cattle and captives rather than on control of land, as was the case with the Shona chiefs. The basis of Ndebele social organization was military rather than territorial.

They derived their subsistence from animal husbandry, agriculture, tribute from subject tribes, and raiding parties. Cattle played a more significant political and economic role than among the Shona, and they were more frequently and admittedly killed for food. The division of labour was much more marked than among the Shona. Higher caste men concentrated their energies on hunting, raiding, and various martial

pursuits, leaving many of the productive activities to the women. Cattle herding and the clearing and fencing of fields were masculine activities but even in their performance most manual work was done by individuals of the lowest caste which consisted of the original inhabitants of the country. The latter, being of Shona stock, probably continued to organize production in a way not dissimilar from that of the Shona with the difference that part of their labour-time was used up in certain public works in which they were periodically called upon to perform.

The above characterization of Shona and Ndebele pre-colonial societies is based mainly on the following: T. O. Ranger, 'The Nineteenth Century in Southern Rhodesia', in T. O. Ranger (ed.), *Aspects of Central African History* (London 1968,); H. Kuper, A. J. B. Hughes and J. van Velsen, *The Shona and Ndebele of Southern Rhodesia* (London, 1955); F. W. Posselt, *Fact and Fiction: a short account of the Natives of Southern Rhodesia* (Salisbury, 1935); A. J. B. Hughes, 'Kin, Caste and Nation among the Rhodesian Ndebele', *The Rhodes-Livingstone Papers*, No. XXI (Manchester, 1956); *Report of the Native Affairs Committee of Enquiry*, 1911 (Salisbury, 1911); *Report of the Mangwende Reserve Commission of Enquiry*, 1961 (Salisbury, 1961).

24. Cf fn. 23.

25. 'Some Sociological Aspects of Community Development', unpublished manuscript (Salisbury, 1964).

26. That the Ndebele were more affected by expropriation from cattle is shown, among others, by Ranger, op. cit. That they were also more severely affected by expropriation from land was a consequence of their more concentrated settlement on the Highveld, i.e. on those lands which most immediately attracted European settlement.

27. Cf. fns. 23 and 26.

28. The distinction between the two types of disguised unemployment is similar to that made by H. Mynt (*The Economics of the Developing Countries*, London, 1964, pp. 44-45) in connection with his analysis of peasant production for the market.

29. By 'cash income' we shall understand income derived from exchange, as opposed to 'income' consisting of goods produced for auto-consumption. The category 'effort-price' is the only possible category of cost for an economy in which there is no social phenomenon of wages. It is here defined as the quantity of labour-time of given drudgery necessary to obtain a unit (measured in real terms) of cash income. We shall use the short-hand expression 'effort-price of participation in the labour market' and 'effort-price of participation in the produce market' to indicate the effort-price of cash income obtainable through the sale of labour-time and through the production and sale of produce, respectively. On the concept of 'drudgery' and on economic calculation in a peasant economy, cf. A. V. Chavanov, *The Theory of Peasant Economy* (Homewood, 1966).

30. *Report of the Inspector of Native Compounds*, for the year ended 31.3.1903. We have already seen that indigenous Africans received in 1903 an estimated £350,000 from the sale of produce. On the basis of wage rates and employment figures given in the *Annual Reports of the Chamber of Mines of Rhodesia* and in the *Annual Reports of the C.N.C.s* I have estimated that the total wage earnings of indigenous Africans were certainly less than £150,000 per annum and probably more than £100,000. It follows that at the beginning of the century sale of produce provided Africans with some 70 per cent of their cash incomes.

31. An index of seasonal variations in indigenous African employment on Matabeleland mines, which I have calculated on the basis of data taken from the *Annual Reports of the Chamber of Mines of Rhodesia* for the period 1903-07 indicates that the supply of indigenous African labour probably doubled between November-December (the peak period in African agriculture) and May-June (the period of greatest under-employment). As for the discrepancy in Ndebele and Shona participation in the labour market, the Annual Reports of the C.N.C.s stated that in 1902, for example, the proportion of able-bodied males in the age group 18-40 who spent at least three months in wage employment was 13 per cent among the Shona and 48 per cent among the Ndebele; in 1903 the corresponding figures were 20 per cent and 50 per cent respectively.

32. Though no marked increase in the L/Ni ratio during the period 1916-19 is shown in Fig. 1, these years were characterized by an acute shortage of labour and must therefore be included in our analysis.

33. 1914 has been taken instead of 1915 owing to a lack of information on the European cost of living index in the latter year.

34. *Report of the Cost of Living Committee*, 1921 (Salisbury 1921,) and *Report of the National Native Labour Board on its Enquiry into the Conditions of Employment in*

Industry and within the Area of Jurisdiction of All Town Management Boards (Salisbury 1948).

35. Cf. for example J. C. Mitchell, 'Wage Labour and African Population Movements in Central Africa', in K. M. Barbour and R. M. Prothers (eds.), *Essays on African Population* (London, 1961), p. 199.

36. 'Economic Development,' op. cit.

37. L. G. Gann, *A History of Southern Rhodesia* (London, 1965), p. 124.

38. E. Tawse-Jollie, *The Real Rhodesia* (London, 1924), p. 148

39. Report of the C.N.C., Mashonaland, for the year 1909, F. W. Witts, 'The Native Labour Question in Southern Rhodesia', *The Empire Review*, XXII, 131, December 1911, pp. 333-34.

40. Gann, op cit., p. 123.

41. According to Hone (op. cit., p. 64), it was actually far easier to obtain labour from these distant areas than from villages situated within a day's journey of a mine or town. Given the scatteredness of gold mines in Rhodesia, it is not correct to assume, as P. Mason does in his already cited work, that only a small minority of the African population could participate in the money economy through the sale of produce. This assumption, as we shall see, did become valid only after the development of capitalist agriculture which, on the one hand, made trade with the African population unprofitable and, on the other hand, occasioned widespread movements of Africans into the Reserves.

42. *Papers relating to the Southern Rhodesia Native Reserves Commission, 1915* (London, 1917).

43. 'The Division of Land Resources in Southern Rhodesia', *Annals of the Association of American Geographers*, XLIV, 1, March 1964, p. 51.

44. Around 1910 rents consisted of a charge of 20s. per annum per adult male on unalienated land and of a charge varying from 10s. to 40s. per adult male per annum on alienated land. In some cases an extra 10s. was charged for each wife exceeding one. (*Native Affairs Committee of Enquiry*, op. cit., p. 9.)

45. *Report of the C.N.C.* for the year 1926. Similarly, the Native Commissioner of Belingwe was reported in the *Bulawayo Chronicle* of 17.11.1923 as follows: 'Mr Bullock instanced the case of a native paying 1d. per head a week for dipping. That was 4s. 4d. a year. The native beast was worth nominally 15s. so that the native was paying insurance at the rate of 30 per cent per annum.' He did not think any insurance company would have the audacity to ask such a rate.

46. An awareness of this relationship between the development of capitalist agriculture and the supply of labour is implicit in this passage taken from 'The President's Address', *Seventh Annual Report of the Chamber of Mines of Rhodesia*, for the year ended 31.3.1902:

With this cheap form of labour [i.e. family labour] at his command, coupled with the fact that, provided he lives on Native Reserves, he has no rent to pay, and that his taxation is reduced to a minimum, the native is enabled year after year to produce a large amount of grain, which is in due course purchased from him by the trader, and eventually at an enhanced price by the mine owner, and in fact he continues year by year to become more affluent, less inclined to do any work himself, and to enter most successfully into competition with the white man in that most important of articles, namely, grain.

I would suggest that a remedy can be found in two ways, namely, by taxation, and the adoption of a co-operative system of farming by the mine owners.

. . . Having the main factor, namely a soil sufficiently good to grow the grain, and in the majority of localities an unlimited supply of farm lands in proximity to our mines, I am certain that . . . grain could . . . be produced and delivered at the mines at a figure not exceeding 15s. per bag. If I am right in my contention, three most important points will be gained:

1. It will be at once seen that grain at this price, coupled with the suggested special taxation, would enable us to successfully compete with the native, for it would practically leave no margin of profit to the middle man (the trader) . . . and, as a consequence, the main cause which at present enables a native to remain idle at his kraal would be removed.

2. There would be an immediate saving to the mines for every bag of grain consumed during the year of from 10s. to 15s. . . .

3. If this scheme of co-operative farming was adopted, it must mean the peopling

of Rhodesia with a class of inhabitants which it requires more, perhaps, than any other class, namely, a settled farming population.

The main motivation for the Administration's active encouragement of capitalist agriculture was not, however, that of solving the labour problem but the desire of the B.S.A. Co. to recoup earlier heavy outlets in overhead capital. Cf. G. Arrighi, 'The Political Economy of Rhodesia', *New Left Review*, 39, September/October 1966.

47. The shortage of labour was far more acute in capitalist agriculture than in the mining industry because the former's period of greatest demand coincided with the months of peak activity in the peasant sector (*Annual Reports of the C.N.C.s*).

48. For example, owing to a low rainfall, difficulties of transport consequent upon a cattle plague and a sharp increase in demand due to a spurt in the mining industry, a 200-lb. bag of mealies fetched 30s. The following year, on the other hand, owing to a large acreage of land having been put under cultivation by the white settlers, an extraordinary favourable season and a consequent large supply of African grain, the price per bag dropped to 10s. (Hone, op. cit., p. 200).

49. Tawse-Jollie, op. cit., pp. 131-6; Hone, op. cit., pp. 194-96. Tobacco cultivation, on a significant scale, was established only after the 1921-23 crisis had created a situation of 'unlimited' cheap labour supplies.

50. Calculated from estimates given in: *Report of the Administrator*, for the years ended 31.3.1904; *Report of the C.N.C., Mashonaland*, for the year ended 31.3.1905; *Report of the C.N.C., Matabeleland*, for the year ended 31.3.1905; *Report of the Secretary for Agriculture*, for the year ended 31.3.1905; *Returns of the Census*, held on the 17.4.1904.

51. B.S.A. Co. *Directors' Reports and Accounts*, various years, *Annual Reports of the Director of Agriculture*.

52. *Report of Cost of Living Committee* (Salisbury, 1913); B.S.A. Co. *Director's Report and Accounts*, for the two years ended 31.3.1914.

53. Cf. the discussion of the causes of low African participation in the labour market at pp. 5, 8-9 above.

54. The concept of 'subsistence' used here is in some ways similar to J. S. Duesenberry's 'previous peak income' (*Income, Saving and the Theory of Consumer Behaviour*, Cambridge, Mass., 1949) and T. E. Davis's 'previous peak consumption' ('The Consumption function as a Tool for Prediction', *Review of Economics and Statistics*, Vol. XXXIV, 1952. The main difference is that the period after which consumption becomes indispensable here is not specified. Moreover, the above authors discuss only the implications of the 'incompressibility' of previous consumption on the propensity to save. Here, on the other hand, the possibility that households may (in the face of a fall in income below 'subsistence') increase their supply of labour or use more intensely the means of production (mainly land) under their control, is also taken into account.

55. *Report of the C.N.C., Matabeleland*, for the year ended 31.3.1903.

56. *Report of the C.N.C., Matabeleland*, for the year 1907.

57. *Report of the C.N.C., Matabeleland*, for the year 1909.

58. *Report of the C.N.C., Matabeleland*, for the year 1909.

59. *Report of the C.N.C., Matabeleland*, for the year 1910.

60. B.S.A. Co. *Directors' Report and Accounts*, for the year ended 31.3.1912.

61. *Report of the C.N.C., Mashonaland*, for the year 1912; Tawse-Jollie, op. cit., p. 252; *Report of the Native Production and Trade Commission of Enquiry* (Salisbury, 1945).

62. E. A. G. Robinson, 'The Economic Problem', in J. M. Davis (ed.), *Modern Industry and the African* (London, 1933), p. 197.

63. *Notes on the Mining Industry of S. Rhodesia*, compiled by N. H. Wilson (Salisbury, not dated); *Report of the C.N.C. and Secretary for Internal Affairs*, for the year 1943.

64. Tawse-Jollie, op. cit., p. 252.

65. *Mangwende Reserve Commission of Enquiry*, op. cit., p. 29.

66. *Ibidem*.

67. Cf. M. Yudelman, *Africans on the Land* (Cambridge, Mass., 1964), pp. 236-37.

68. *Report of the C.N.C., Mashonaland*, for the year 1909; *Southern Rhodesia Native Reserve Commission*, op. cit., p. 9; Gann, op. cit.

69. *Annual Reports of the C.N.C.*

70. Broadly speaking we shall say that the productive absorption of the surplus is 'efficient' when it takes into account existing scarcities of factors of production.

71. These forms of surplus absorption consisted of all labour-time directly or indirectly expended on religious and social activities whose main function was to foster

social cohesion. There were, of course, many activities in traditional African Societies whose main function was productive, or administrative, but which contributed to strengthen social cohesion. The empirical distinction between the two would often be problematic if not impossible.

72. *Annual Reports of the C.N.C.; Native Affairs Committee of Enquiry*, op. cit., *Southern Rhodesia Native Reserve Commission*, op. cit.

73. *Annual Reports of the C.N.C.*

74. The rate of consumption of cattle, and therefore their rate of accumulation, was related to the size of the surplus. The ritual aspect of cattle played a crucial role in this relationship. In periods of adverse natural conditions there would be more 'pretexts' for ritual killings, the rate of cattle consumption would increase and the rate of accumulation decrease. Conversely, in periods of large yields the rate of accumulation would increase.

75. *Annual Reports of the C.N.C.; Native Affairs Committee of Enquiry*, op. cit.; *Report of the Director of Agriculture*, for the year 1914.

76. *Annual Reports of the C.N.C.*

77. By 'land-consuming bias' we shall understand the tendency of an investment or innovation to lead to a greater use of land for a given output. Similarly, we shall talk of land-saving, labour-saving, labour-intensive, and capital-intensive biases. It goes without saying that these distinctions are not water-tight and that an investment or innovation may have simultaneously two or more biases.

78. *Annual Reports of the Director (or Department) of Agriculture*.

79. B.S.A. Co. *Directors' Report and Accounts*, for the two years ended 31.3.1914.

80. 'Statement of Case of Rhodesian Agriculture Union', in *Report by Brigadier General F. D. Hammond on the Railway System of Rhodesia*, vol. II, Ann. 'C' (Salisbury 1925).

81. *Annual Reports of the Director of (or Secretary for) Agriculture*.

82. *Report of the C.N.C., Matabeleland*, for the year 1909; *Report of the C.N.C.* for the year 1918.

83. *Reports of the C.N.C.*, for the years 1920 and 1921.

84. *Reports of the C.N.C.*, for the years 1918, 1919, and 1922.

85. Calculated from 'The Economic Position of the Native', in *Economic and Statistical Bulletin of Southern Rhodesia*, I (new series), 8, 1933.

86. *Reports of the C.N.C.*, for the years 1921, 1922, 1923, 1925, 1926, and 1931.

87. The amount paid in dog tax by Africans, 'an unflinching barometer indicating the state of their cash holdings', as the C.N.C. put it in his Report for the year 1932, fell by almost 33 per cent between 1921 and 1923 and by over 43 per cent between 1930 and 1934 (calculated from the *Annual Reports of the C.N.C.*).

88. *Report of the C.N.C.*, for the year 1926.

89. *Report of the C.N.C.*, for the year 1928.

90. *Report of the C.N.C.*, for the year 1932.

91. G. K. Garbett, 'The Land Husbandry Act of Southern Rhodesia', in D. Biebuyck (ed.) *African Agrarian Systems* (London, 1963), p. 190.

92. *Native Production and Trade Commission*, op. cit.

93. The number of grade bulls owned by Africans purchased through the Native Department, i.e. excluding those bought privately, increased from 918 in 1925 to 3,737 in 1930 (figures taken from the *Annual Reports of the C.N.C.*).

94. According to the estimates of the C.N.C., the number of African owned wheeled vehicles more than doubled between 1926 and 1930.

95. *Reports of the C.N.C.*, for the years 1934 and 1940.

96. According to all available evidence, i.e. that contained in the sources cited in Table 1 the fall in maize and cattle prices that occurred during the two slumps led to a drastic deterioration in the terms of trade of the peasant sector with the capitalist sector, notwithstanding the relatively moderate fall in money wages. In defining the concept of surplus (see p. 14 above) we disregarded its relation to the terms of trade between the peasant and the capitalist sector. In the present context this relation has crucial importance and must be briefly discussed. A worsening in the terms of trade tends to reduce the real value of the surplus for two reasons: (a) because it increases the quantity of output that must be foregone in order to obtain those means of subsistence which are produced within the peasant economy; and (b) because it reduces the unitary value of the surplus in terms of the commodities against which it has to be exchanged in order to be realized. The negative impact of worsening terms of trade on the peasantry's surplus-generating capacity will therefore be the greater the more dependent are the

peasants on exchange with the capitalist sector for their subsistence requirements and for the conversion of the surplus in its desired forms. It follows that the steady increase in such dependence which, as we have seen, took place in Rhodesia during the first two decades of this century had, among other things, the effect of magnifying the negative repercussion of the depressions of the early 1920's and 1930s on the surplus-generating capacity of the African peasantry.

97. Cf. Myint, op. cit., pp. 45-46. Myint deals with innovations in crops only, but his remarks obviously apply to most land-saving innovations such as green manuring, conservation works, etc.

98. *Reports of the C.N.C., Matabeleland*, for the year ended 31.3.1905 and for the year 1910, *Report of the C.N.C.*, for the year 1920.

99. *Mangwende Reserve Commission of Enquiry*, op. cit., p. 40.

100. *Ibidem*.

101. *Native Production and Trade Commission*, op. cit., p. 26.

102. *Report of the C.N.C.*, for the year 1938; *Report of Commission to Enquire into the Preservation (. . .) of the Natural Resources of the Colony* (Salisbury, 1939), pp. 11-12.

103. The assumption of a changing role of the plough in peasant agriculture is consistent with the fact that, while before 1920 the acreage under cultivation increased rapidly (at an average rate of almost 5 per cent per year between 1911 and 1920, according to the estimates of the C.N.C.) and the proportion of indigenous males in wage employment remained constant (cf. Fig. 1), after 1920 the rate of increase in the acreage under cultivation slowed down (it averaged only 2.2 per cent per year in the period 1920-45) and the proportion of indigenous males in wage employment rose sharply. The assumption is also consistent with observations of the Native Commissioners: in 1908, for example, the C.N.C., Matabeleland, reported that the introduction of the plough tended to reduce the supply of labour because it induced greater involvement of male labour in the cultivation of land; in 1927, on the other hand, the plough began to be referred to as a 'labour saving device'.

104. On this opinion the literature is unanimous. Cf., for example, A. Pendered and von Memerty, 'The Land Husbandry Act of Southern Rhodesia', *Journal of African Administration*, VII, 3, 1955; Barber, op. cit.; Yudelman, op. cit., pp. 132-33; G. Kay, 'The Distribution of African Population in Southern Rhodesia, some preliminary notes' *Rhodes-Livingstone Communication*, No. XXVIII, Lusaka, 1964.

105. *Report of the Native Education Enquiry Commission, 1951* (Salisbury, 1952).

106. Calculated from: *Annual Reports of the Commissioner of Taxes; Annual Reports of the C.N.C. and Secretary for Internal Affairs*, and *Southern Rhodesia Statistical Yearbook* (Salisbury, 1947).

107. *Native Production and Trade Commission*, op. cit., p. 25. These fears were fully justified in view of the continuous curtailment of the *de facto* availability of land to Africans and also in view of official statements such as the following:

It is intended to develop the native reserves so as to enable them to carry a larger population, and so avoid, so far as possible, the necessity for acquisition of more land for native occupation. . . . (Report of the C.N.C., for the year 1932.)

108. *Second Report of the Select Committee on the Resettlement of Natives* (Salisbury, 1960); and *Annual Reports of the C.N.C. and Secretary for Internal Affairs*.

109. R. W. M. Johnson, *African Agricultural Development in Southern Rhodesia* (Stanford, 1964), pp. 196-97; Yudelman, op. cit., p. 197.

110. *Interim Report on Livestock and Meat with special reference to Cattle and Beef* (Salisbury, 1936); Yudelman, op. cit., pp. 190-91.

111. *Native Production and Trade Commission*, op. cit., p. 50.

112. Cf. A. K. Sen, *Choice of Techniques* (Oxford, 1962), p. 30 and Appendix A in particular; see also Chayanov, op. cit., p. 7. This discrepancy in investment behaviour is largely traceable to differences in 'time horizons' in production and investment decisions. But the 'time horizon' of the peasantry is itself a variable depending on the latter's surplus-generating capacity: the smaller such capacity, and therefore the more are the peasants struggling to maintain a certain level of subsistence consumption, the shorter their time horizon in reinvesting surpluses. It follows that the reduction in the African peasant's surplus-generating capacity that occurred in the 1920s and 1930s must have widened the gap between their 'time horizon' and that of capitalist producers.

113. Thus, in the late 1950s the amount of private capital invested in European farms was estimated at £250m. (*Select Committee on the Resettlement of Natives*, op. cit., p. 49), while the gross value of all capital (i.e. including accumulated Govern-

ment investment in infrastructure) in African agriculture was roughly estimated at £90m., over 35 per cent of which was accounted for by livestock. (Yudelman, *op. cit.*, p. 155). At the time there were less than 4,500 European farms while the number of African Holdings was estimated at about 380,000. It is, of course, impossible to assess the extent to which this huge difference in capital invested has been brought about by market forces rather than political mechanisms owing to the interaction of the two in the historical process.

114. In the 1950s it was reckoned that only 235,000 families could derive a subsistence (as determined by a rather restrictive formula adopted by the Government) from the land available for African use. This meant that probably more than half of the African population had to obtain the bulk of its means of subsistence from wage-employment (*Select Committee on the Resettlement of Natives*, *op. cit.* p. 43) But even among the families who could derive a subsistence from agricultural production it was only a small minority that obtained its *cash* requirements from the sale of produce. In the Mangwende Reserve, for example, it was found that the so-called 'Ordinary Farmers', under which category fell 70 per cent of all peasant holdings in the Reserve, had average net cash incomes (sales minus expenses) of only £3½ per annum as against the £40 earned by the 'Master Farmers' (rich peasants) who represented 4-5 per cent of all peasant holdings. (*Mangwende Reserve Commission of Enquiry*, *op. cit.*, p. 32).

115. Cf. on this A. G. Frank's theses on Latin American underdevelopment in his *Capitalism and Underdevelopment in Latin America* (New York, 1967).

116. Lewis's reference to 'primary accumulation' runs as follows: '[The capitalists] will not support proposals for land settlement, and are often instead to be found engaged in turning the peasants off their lands (cf. Marx on "Primary Accumulation"). This is one of the worst features of imperialism, for instance.'

117. Cf. p. 2 and fn. 13 above.

118. *First Interim Report of the Development Co-ordinating Commission of Southern Rhodesia* (Salisbury, 1948), *Report of the Select Committee on the Subject of Native Industrial Workers' Union Bill* (Salisbury, 1956). The *Report of the National Native Labour Board*, *op. cit.* gives the following figure of labour turnover among the employees of the Bulawayo Municipality during the year ended 31.3.48:

Number employed at 1.4.47	3,059
Number engaged during the year ended 31.3.48	3,448
Number discharged	3,426
Number employed at 31.3.48	3,081

119. Development Co-ordinating Commission, *op. cit.*; *Censuses of Industrial Production, 1938-1953*; *Annual Report of the Chief Government Mining Engineer and Chief Inspector of Mines*, for the year 1954.

120. *Report of the Urban African Affairs Commission* (Salisbury, 1958); D. G. Bettson, 'The Poverty Datum Line in Central Africa', *Human Problems in British Central Africa*, XXVII, June 1960.

121. Cf. Mitchell, *op. cit.*, p. 223 also for references to the vast literature on the subject.

122. *Annual Reports of the Director of Agriculture*.

123. *Annual Report of the Director of Agriculture*, for the year 1922.

124. Throughout his article, Lewis implicitly assumes the operation of competitive forces in the capitalist sector.

125. Cf. Arrighi, *op. cit.*

126. I have discussed this problem more extensively in the essay 'International Corporations, Labour Aristocracies and Economic Development in Tropical Africa', to be published in a volume of readings on underdevelopment edited by R. I. Rhodes (Monthly Review Press, forthcoming).

127. The ratio of capital formation to G. D. P., which had averaged approximately 37 per cent in the period 1951-58, fell to 25.5 per cent in 1959-61 and to 15.4 per cent in 1962-64. (*National Accounts and Balance of Payments of Rhodesia, 1965*, Salisbury, 1966.)

128. Cf. Arrighi *The Political Economy of Rhodesia*, *op. cit.*

129. 'Economic rationality and Behaviour Patterns in an Underdeveloped Area. a case study of African Economic Behaviour in the Rhodesias,' *Economic Development and Cultural Change*, VII, 3, 1960, p. 251.

