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ABSTRACT

PADDY LAND OWNERSHIP, RETURNS ON FINANCIAL ASSETS, CAPITAL ACCUMULATION AND ECONOMIC DEVELOPMENT

The archaic land tenurial patterns in developing countries have been in part responsible for the perpetuation of low agricultural productivity, a distorted land market, and locked in capital. Elimination of the tenurial system by acquiring all share cropping land by the state, by compensating the owner with financial assets (perpetual annuity), whose annuity is equivalent to the average rent of the land, calculated as half way between the highest and the lowest over a predetermined period, and disposing the land to the tillers at a price, inclusive of interest on the value of land, would remove most of the constraints on economic development and enucleate locked in capital. Interest earned on capital repayments of tiller could cover landlord's annuity and the accumulated value of land could generate much needed capital for economic development.

PADDY LAND OWNERSHIP, RETURNS ON FINANCIAL ASSETS, CAPITAL ACCUMULATION AND ECONOMIC DEVELOPMENT

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Introduction :

Agriculture is often the dominant sector in the economies of the developing countries. At least 50% — 60% of the population is engaged in pursuits connected with agriculture and more than a quarter of the national income in these countries is generated in that sector. The population density in the rural agricultural sector is quite high, land ownership and cultivation arrangements are rather complicated, and in most cases, an obstacle to rapid economic development. Two of the widely prevailing systems are owner cultivators and tenant cultivators.[1] The latter takes numerous forms, and in most developing countries more than one such form prevail simultaneously, at a given time.

A rapid transformation of the agricultural sector aimed at incereasing productivity is a prerequisite, for rapid rural transformation and economic development in general, and particularly so in a developing country which cannot acquire sufficient foreign resources. The prevailing ownership patterns of agricultural land in developing countries, in particular, 'Ande' as called

in Sri Lanka and absentee landownership, are believed by some, to be an important obstacle to the growth of agricultural productivity. For instance, Banking Commission of 1931 and Das Gupta (1940). However, there is no general consensus on the relation between tenancy patterns and productivity of land.

Nevertheless, there are experiences which show that asset re-distribution in favour of the poor is a pre-requisite for sucessful economic liberatisation. Liberalisation without redistribution of asset ownership exacerbates already existing polarisation and marginalisation process, in the rural sector. Most important economic asset in the rural sector is land and redistribution of land is often a prerequisite for success of economic liberalisation.

According to Belassa (1982) the land reform related policies of Taiwan during 1949—53 resulted in the following :

— enabled multiple-cropping which led to rapid growth in productivity.

— land lords were compensated and their income was invested in industries. 30% of the value of land was given in tocks of public corporations.

— land reform and the consequent expansion of agricultural output contributed to industrial growth in many ways.

— land reforms not only helped to equalise the distribution of income within agriculture but also stimulated the demand for human capital.

1. It is not easy to defined a tenant. Supreme Court of Sri Lanka has defined a tenant as thus, the definition contemplates three different kinds of work (ploughing, sowing and reaping) for which aetual labour is necessary, and if any hired labour is in fact employed for two of these ktnds of work, then the cultivator is not a tenant cultivator. (New Law Report LXX, Visvanathn Vs Thurairaj and another). However, an owner who employs hired labour for any or all of these activities could still maintain his legal status as the owner. In economic literature a tenant is one who does not own the land he cultivates but obtains the right to cultivate on some other arrangements such as lease, or other formal or informal tennacy arrangements.

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The economic case against share-cropping rests on three premises:

(*a*) incentive argument; under share cropping arrangements a portion of output is always collected by the landlord as rent, which discourages the tenant to increase output, as only a fraction of the fruits of his labour is all owed to be collected by himself.

(*b*) security argument; under share cropping arrangements hardly any security is guaranteed to the tenant. In most cases, tenancy arrangements are made for short period and a landlord can change his tenant at his will. (In certain countries, such as Sri Lanka, security of tenure is guaranteed by law. In reality however, landlords often circumvent the legal barriers by using their social and economic power. In certain traditional societies this aspect is counter balanced by limits placed by tradition and norms against tenancy eviction, which come down from time immemorial).

(*c*) investment argument; under share cropping arrangements the landlord charges high and increasing rents which discourages the tenant to invest in new technologies. Even in countries where the landlord's share is fixed by law it is not uncommon that the landlords rerort to extra legal methods to extract a larger share.

Marshall (1920), showed that tenants employ less labour than the owner cultivators. Bhaduri (1973), argued that under share cropping arrangements investment is likely to be low and they permit the owner not only to parcel out land but also to charge exploitative" rents. However, the alleged virtues of owner cultivators are not accepted by some economists; for instance, Griffin (1976) and Newberry (1977) are in favour of share tenancy arrangements. Stiglitz (1974), argued in favour of share tenancy on risk and unceratainity ground. He argued that when the proceeds are shared by the owner and the tenant, that the risk of crop failure is also shared. Hence, the tenant is more willing to take risks under share cropping arrangements than under sole ownership. Cheung (1969), showed that different arrangements do not have different efficiency levels as long as there are private property rights.

Ceylon Banking Commission of 1931 states, a tenant who leases a plot of land . . . (has) no ambition to improve the value of this crop by systematic manuring of the soil'. Das Gupta (1940), who surveyed Kurunegala District too recognised tenancy as a hindrance to land improvement. However, the Kandyan Peasantry Commission of 1951 did not show any objection to the practice of share cropping. Sarkar & Tambiah (1975), showed that tenants obtained higher average yield than owner cultivators. ARTI (1974b and 1975) too showed that tenants in the majority of districts surveyed recorded higher average yield than the owner cultivators.

All the above arguments are based on the analysis of the existing land ownership patterns. What we are particularly interested in, in this articles is the impact of the reorganisation of the ownership patterns of paddy land.[1] Here too, no consensus has been reached. Gahatak & Ingersent (1984). have shown that land reforms in Egypt, Taiwan and South Korea resulted in increased agricultural productivity. On the other hand, Barry & Cline (1979)

1. Paddy is unhusked rice.

have indicated that the land reforms in Mexico, Bolviai, Indonesia have proved to be unsuccessful. Their analysis is based on the productivity differences between private land and the land that came under land reform, which were organised as cooperatives or collective farms.

A number of authors have shown that output per acre is highr in small holdings than that in large farms; e.g. Bauer (1946), Sen (1962), Okahawa (1972), ARTI (1974a). In some studies the plots examined were of micro size which could not guarantee a reasonable income for the cultivators.

Hence, if any land reforms are envisaged the viable size of the holding has also to be determined. This issue will be dealt with later in the paper.

Accumulation of capital by transferring the excess rural labour has been well documented, among others, by Lewis (1954) Ranis & Fei (1964), and Jorgenson (1961). However, their emphasis is on the transfer of labour from less productive to a more productive sector and ensuing increased productivity and growth. Nurkse (1953), showed the presence of disguised savings potential in the rural economy which could be activated for capital formation. He too, related mobilisation of savings to reallocation of labour. However, only a few studies have been undertaken on the economic implications of divergent rates of return on capital assets in the rural sector and also its relation with rates of return on investment in the organised sector, especially, in financial assets.

Mackinen (1973) has shown that, an economy of a developing country is fragmented in the sense that firms and households are so isolated that they face different effective prices for land, labour, capital and produced commodities . . . Authorities then cannot presume that socially profitable investment opportunities will be taken up by the private sector . . . Accumulation of capital per se means little in an under-developed economy. . .

He further emphasised that the fragmentation of the developing economy causes the misallocation of land and labour and suppresses entrepreneurial development. He showed the need for an appropriate policy in the domestic capital market, in particular to use the rate of interest to integrate the fragmented money and capital market. That means, when all state regulated interest rates are de-controlled, the market interest rates will rise to values which would reflect the opportunity cost of capital. The economic units which could not earn profits above these rates will be scrapped and assets sold and proceeds deposited in the institutions in the organised sector, so that the previous owners could now get a higher return as interest from their savings.

This would transfer the capital resources from a low productive activity to high productive activity. He also stressed the futility of capital accumulation in a fragmented economy where rates of return on physical and financial assets are negative, because the state controlled interest rates are lower than the rate of inflation, while remunerative investment opportunities are foregone due to lack of capital caused by the same factor.

Mackinen (1973), defined economic development as the reduction or dispersions in social rates of returns on existing and new investment undef domestic entrepreneurial controls. This means, unregulated market interest rate encourages the transfer of capital to more productive areas. Accordingly, developed capital market monitors efficiency of the deployment of existing capital stocks by pushing rates on physical and financial rates towards equality and thereby significantly increasing average rates of return. While admitting that Mackinen approach is a new path-breaking attempt, his analysis does not cover the entire problem of capital accumulation in developing countries.

An increase in the rate of interest in such an economy might pave the, way for integration of the fragmented money and capital market. However that alone is insufficient to realise all potential savings in the rural economy A change in the rates of interest by itself cannot bring about the type of structural transformation that is required for rapid development of the economy. Government intervention becomes essential to provide a strong impetus for capital accumulation and transformation of the rural sector.

In this sense the Mackinen model depicts an incomplete picture of the process of capital formation and economic development. Among the limitations of this model are the following :

(*a*) The model considers all government intervetions as having the same consequences as those that attempt to promote import substitution industrialisation: hence it is concluded that any intervention by a government is counter productive,

(*b*) it has ignored the possibility of combining both the government intervention and the market mechanism and has used only the market mechanism, ie, rate of interest, as a means of integrating the fragmented economy.

The contention of this paper is that Mackinen's approach to the solutions of the capital deficiency in the developing countries is correct but underestimates the role that the government could play in the capital formation process. It is therefore, a major shortcoming of the model. The main objective of this paper is to show that the government intervention in developing countries is not always incompatible with high growth, and in fact, better results could be obtained by linking the government actions with the price mechanism.

Equalisation of interest rates, by raising the lower subsidised rates of interest and lowering the exorbitant rates prevailing in the rural and urban informal sectors to the level of those prevailing at the formal sector, is a prerequisite for integration and development of a fragmented economy. However, it is hypothesized that this process cannot bring the integration process to an optimal level until the skewed asset ownership is removed. Asset ownership can be made more equitable only by government actions and that process could be orchestrated to generate substantial savings which could be redirected towards rural investment.

The Model

The model presented here is based on three vital assumptions :

(*a*) size of an agricultural holding, in particular that of paddy farming, has a direct negative relationship with output per unit of land; smaller the size higher the output per unit of land. However, micro size plots are also inappropriate as such a plot would not ensure a sufficient income to the farmer.

(*b*) ownership of agricultural land too, has a direct relationship with output per untit of land. Owner cultivators produce more per unit of land than farmers working under any other system of land tenure. Although this has not been positively proved by field surveys, the success of land reforms in certain countries testify to the validity of our assumption. The motivational force generated by aspirations to reap both economic and non economic benefits associated with land ownership is quite powrful and that alone has sufficient psychic power to push the farmer to work harder.

Private land is assumed to be the prime mode of ownership, even after re-organisation; the only difference is that it is only the tillers who can own agricultural land, and that too, small size holdings which are more or less uniform in size (The viable size of a holding will be discussed later). The failure of the land reforms in many countries was due among other reasons to initial introduction of other types of land ownership.

(*c*) There are other types of assets, both physical and monetary, whose rates of return are much higher than that from owning agricultural land, in particular, paddy land. Transfer of ownership of land to the actual cultivator and compensating the existing land owners by financial assets (perpetual annuities) which have fixed rates of return that are equal to the average rents or the shares the landlords received in the few previous crops, the average measured as the mid value between the highest and the lowest share over a pre-determined period, will not only increase agricultural output but also permit the accumulation of large savings.

The difference between returns on the financial assets and that on paddy land is quite large so that the reallocation of asset ownership would permit collection of a large sum of capital for rural development,

(Details are given later).

The existing land ownership pattern is a hindrance to economic development because :

(*a*) the land owners continue to be/or have been forced to be satisfied with the lowest rate of return on their assets, despite the availablility of alternative opportunities, such as monetizing and transferring the proceeds to more productive sectors,

(*b*) the absentee landlordism prevents the land being put into maximum use.

The asset market is fragmented in the rural economy owing to the presence of absentee landlordism as well. The market price of unencumbered paddy land is quite high. As the price of the tenant entangled land is quite low, the share cropping aggrangements artificially depress the market price of paddy land and also engulf enormous resources under that cover. Any buyer would be willing to pay only the capitalised value of the legal income, which is only a fraction of the free market price. (Sometimes the owners do not sell paddy land even at a higher price owing to non-economic rassons which are not discussed here). However, the tenant is unable to purchase the land as he is short of capital. This dichotomy could be removed only by the state. If paddy land were liberated from this encumberence it too can be traded at its true scarcity value. Immense wealth generating potential too, is locked up in this system. The transfer of paddy land to the actual titller would not only liberate such land but also set in motion a process which would generate large capital. What is requisd is to enucleate the potential capital latent in these f land.

The 'ande' or share cropping system depresses the market price and also keeps the productivity of land low for a number of reasons :

(*a*) it stands as a fetter and the owner cannot get a price reflecting the opportunity cost for his land, that is, the free market price,

(*b*) it temporises the trust between both parties and make way for fraudulent practices, as a result required inputs are not applied at the correct time. This keeps the productivity of land low,

(*c*) it does not allow production to be organised in line with the optimal labour/land ratio, and that too, keeps the productivity low.

Once share cropping is abolished and the tiller is made the sole owner, these obstacles will disappear paving the way for enchanced productivity of land. This permits the returns on land-owning to spurt up and to reach the equilibrium level with those of other assets. At this stage both physical and monetary capital markets get integrated.

It could also be argued that eradication of share cropping can also be done by converting a share cropper into an agricultural labourer, which gives the owner an entreprenurial role. Such a transformation, however, cannot be justified on equity or efficiency grounds. It would worsen the already existing inequalities as shown by the successive Central Bank Consumer Finance Surveys; the Gini Coefficient in 1973 was 0.41 and it rose to 0.52 in 1981/82, and when the entreprenuer employs labour he equates marginal product to marginal revenue in order to maximise profits. But that would neither maximise output nor employment. The marginal productivity of a unit of labour hired by an entreprenuer who does not work along with such labour is always lower than that of a unit of labour hired by the owner cultivator who works along with such labour. An owner cultivator who works along with hired labour has the wherewithal to apply to obtain maximum effort from the hired labour whereas, the entreprenuer who does not work along with labour does not have sufficient means to motivate labour to obtain maximum effort.

The advantage in this method is that the government could generate capital without investing capital. Normally if more capital were to be generated, assuming that there are constraints on increasing taxation, an initial investment has to be made. But in this case no initial investment is required. What is required is to reorganise asset ownership by using a government's coercive power. The hidden savings potential latent in these paddy land could be unearthed for development.

In most cases land reforms have meant the compulsory transfer of the ownership of land from the present owner to some other person, invariably without compensation. However what is envisaged here is different. The rationale of our model is that the differences in the rates of return earned by different types of assets can be made use of, not only to minimise income distribution disparities and increase production, but also to generate large savings for rural development, without making parties to suffer any financial losses.

However, mere availability of land for the tiller would not by itself guarantee higher productivity unless the tiller is lberated from the other shackles as well. Liberation of the tillers from the land lord is only one major step foreword. There are many other obstacles, such as exploitation in particular, by money lenders, produce traders and agricultural equipment owners. Adequate extension services have to be provided outside this exploitative net work if real liberation is to be effected. The resources required for the provision of extension services could be obtained from the capital accumulated from the reorganisation of ownership.

Proposal

What is proposed here, is to transfer all agricultural land into an institution, which may be called an Agricultural Development Bank, and after having determined the viable size of a holding, distribute such land among the tillers. This transfer of ownership to the tiller has to be in stages and he has to pay the

value of the land by annual instalments and the amount of the instalment may be fixed higher than the share or the rent he paid to the previous landlord. The previous owner of the land could be issued a financial asset (a perpetual annuity) which guarantees an annuity, equivalent to the average return he had obtained from his land, during the preceding three crops. Determination of this rate of return is fairly simple in countries such as Sri Lanka, where the owner's share is fixed by law.

In certain instances landlords assist their tenants in numerous ways. Once the landlord is separated from the tenant the assistance given by the former to the latter relinquishes and that vacuum has to be filled. **The Agricultural Development Bank** can now assume the role of the former landlord and extend the same type or perhaps more useful assistance at more efficient and reasonable terms than those given by the former landlord. The resources accumulated from this transfer of assets could be used for that purpose. The success of this programme depends, to a great extent, on the ability to improve productivity, so that the returns on paddy cultivation reaches those of other investments.

The instalment the tiller has to pay, could be fixed at a hihger value than the rent or the share he had been paying the previous owner because among other things, the tiller now owns a larger holding, he is the sole owner and the total income he gets would presumably be larger. When the instalment he is called upon to pay is larger, he may work harder to earn more to claim ownership of the land.

These instalments could be invested in the formal sector which brings much higher returns. In certain countries, such as in Sri Lanka, the difference could be several times the return on owning agricultural land. Initially the returns from investment would not be sufficient to cover the payments to the previous owner. Hence, the government may have to advance funds to meet the deficit. However, as money gets accumulated in the account the return on investment would cover the entire payment of the previous owners. In time the returns on investment would be sufficient not only for the payments to previous owner's, arrears of deficit in the account but also to amass a large sum of money to finance the investment needs of the country. This capital could be invested in projects which are targeted on poor, to reduce income distribution disparities.

This process can be shown by a mathematical formula. Let

the price of a unit of land	=	Pl
the rate of interest in the formal sector	=	r
the rent or share of the landlord	=	c
the instalment paid by the tiller	=	x

where $x \gg c$, and $r \gg c/Pl$

Hence, in the first year balance in the account = (x (r/100) — c), which is a negative value; in the second year the balnce = (2 x (r/100) — c), which again is negative, and so on. The accumulation of capital can be shown by,

$$[x\ (r/100) - c] + [2x\ (r/100) - c] + \ldots . + [mx\ (r/100) - c] + \ldots + [nx\ (r/100) - c] + (x\ (r/100)\ .\ n/s2\ (n + 1) - nc$$

The break even point, that is where the interest on accumulated instalments is just sufficient to cover the landlord's income c, is

$$[\ mx\ (r/100) - c\ ) = 0, \text{ ie.}$$
$$m = (c/[x\ (r/100)\ ].$$

Until the instalment m, is reached the balance is negative but continues to diminish the value in successive instalments; thereafter a positive balance is accumulated and by the 2mth instalment all the deficit had been paid up and beyond 2mth the tiller's instalment and the interest on accumulated balanc are a net gain. However, certain deductions for the interest on money advanced by the government may be esstntial.

This process can, more clearly be explained by a diagram. In figure 1, segment (la), shows the change in productivity per unit of land as the size of the holding changes. The assumption is that large holdings have a lower productivity per unit. Hence, curve P, gradually diminishes as the size of the holding increases. When the holding is very small the productivity is very high. This may be due either to more intensive, application of labour or use of land. With the increase in the size of the holding productivity per unit of land falls due to technical reasons and produce less for scarce resuouce (Yotopoulos & Nuget 1976).

Another study based on cross sectional regression model by Berry & Cline (1979), showed that in countries such as Brazil, Columbia, Philippene, West Pakistan, India and Malaysia there was a negative relationship between the farm size and output per unit of land. The observed differences in productivity of the land are basically from differenees in cropping intensity and product mix, rather than from crop yield disparities. However, these studies were based on traditional agriculture and whether the same observation would hold after technical changes has yet to be proved.

The segment (lb), shows the relationship between change of degree of ownership of the tiller and the output per unit of land.[1] A positive strong relationship between the degree of ownership and the output is assumed. What is shown here is the productivity increases as the ownership rights of the person who actually farms the land are increased. Curve p' gradually increases as the ownership of the tiller increases and there is a jump when 100% ownership is achieved. This is owing to the fact that when the tiller becomes the full owner he has absolute freedom to make decisions and has also a right to own the total proceeds. This, as we have shown earlier, has not been proved positively, by studies which have examined the existing ownership patterns, but reorganisation of ownership in favour of the tiller would no doubt motivate

1 Here full ownership means the freedom to repatriate the total output,

the tiller to work harder to acquire the block of land on which many generations have worked as tenants. Hence, we assume here that as the form of ownership by the tiller improves so is the productivity per unit of land.

The segment (1c) shows total output, savings and consumption as a function of the degree of ownership of holding of the tiller. Total output curve t, is p', in (lb) corresponding to different degrees of ownership multiplied by extent of land. An important point is that the savings of the tiller is almost zero, until his ownership of the proceeds reaches 75%. As the degree of ownership increases so are the savings of the tiller. Consumption of the tiller increases slightly when the degree of ownership improves. His income increases along with the improvement in the style of ownership and also now he has more assets which could influence his consumption.

The segment (ld), shows the behaviour of total output, savings and consumption when the size of the holding changes. The total output curve, t' is curve p, corresponding to different sizes of holdings multiplied by the extent of the land. Here too, consumption increases with the increase in the size of the holding and the point of interesection between total output curve t' and the consumption curve c, gives the minimum viable size of the holding. Any holding smaller than this would not ensure an income even to meet the consumption needs. The ownership of holdings by the tillers larger than this size generates savings within the household itself.

Determination of the viable size of the holding is a policy decision which depends on, among other things, on a number of factors such as the availability of land, possibility of intercropping, number of unemployed tenants, distribution of income, and the level of savings.

The behaviour of the total net income,[1] consumption and savings of farm families before and after the reorganisation of asset ownership is shown in the figure 2. With the tenant becoming the de- facto owner the net income spurts up and thereafter it increases gradually. The savings by the time of reorganisation was rather meagre. However, as the net income of the farm family increases so tbe the savings. The consumption of the farm family is now much higher because the total income is higher as more assets are available to the farm family.

If this situation were to be contrasted with the pre-reform period some complications may arise. The land holdings of the farm family range from micro units to little smaller than viable size units. Accordingly, a large number of situations have to be presented. Instead what is presented here is the situation of a farm family which owns one acre of land as a proxy of all the other small farmers. The net income of such a farm family started with a fraction of that

1 Net income hare means total income minus all purchased inputs. It does not include land rent or imputed costs.

of the post-reform farm family, but that ratio diminishes as time passes because the productivity improves faster in the latter. In the pre-reform farm. family savings are practically nil and the consumption too, is much lower Such farmers are eternally in debt (Figure 2).

Case Study — Sri Lanka

Sri Lanka is an agricultural economy in which more than 55% of the population is engaged in activities connected with agriculture, which accounts for about a quarter of the gross domestic product. Agriculture is divided mainly into two sub sectors ; ie, plantation and food crops. Our interest in this study is on the food crop sub sector. According to Peiris (1976), the census data in 1960s show that approximately 20% to 30% of the total cultivable land was under paddy. This percentage rose to 34% in 1982. (Census of Agriculture 1982) In the Central Highlands and coastal districts of the south the share cropping during the former period was about 40%. That too rose to 47% in 1982.

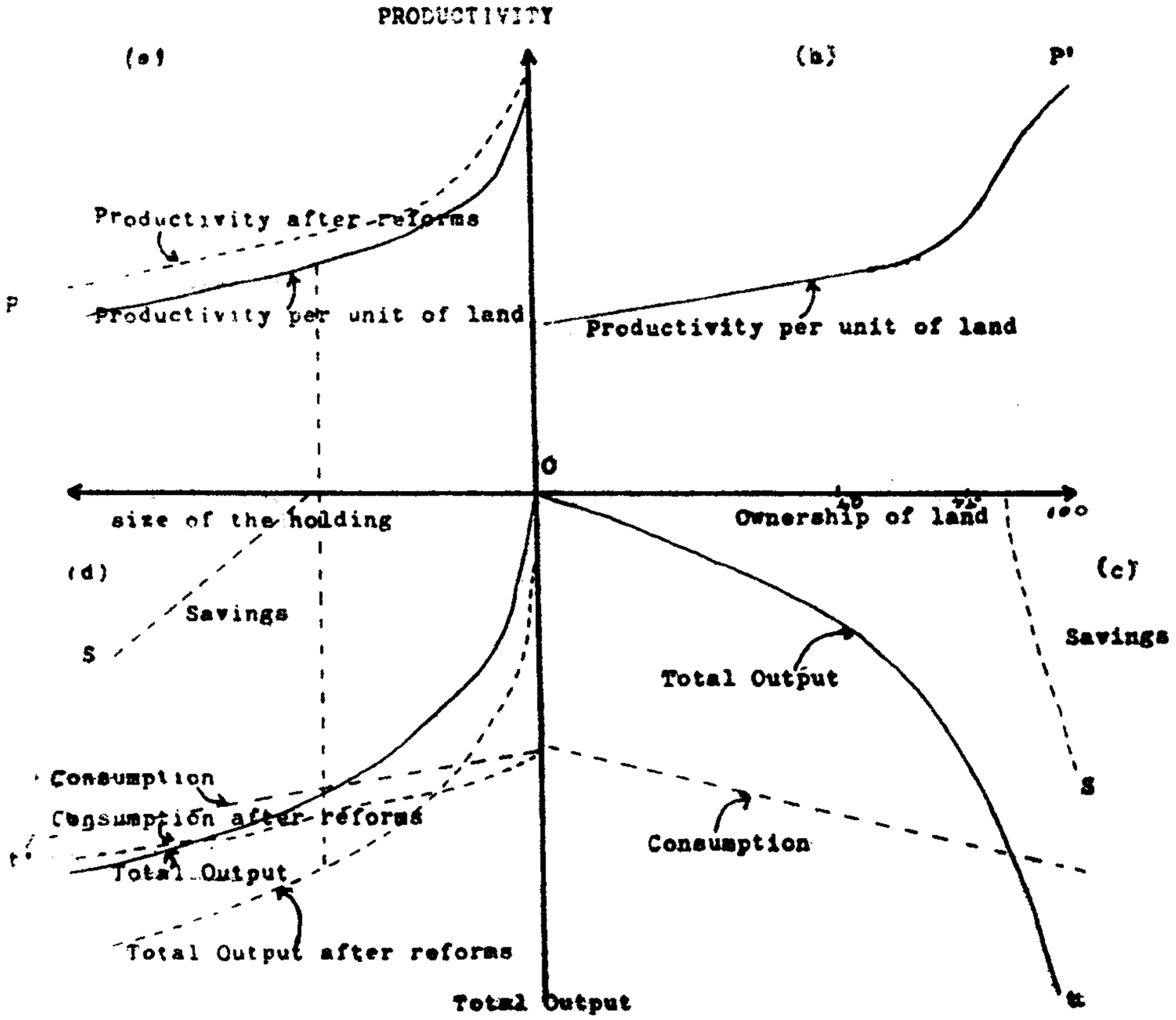
During the early part of the independent Sri Lanka, it was the national leaders who showed an interest on the peasant problems, but there too no reference was made about ande cultivators. Their interests was centered on the problem of increasing productivity. (Peiris 1976) Even the Final Report on the Economic Survey of Rural Ceylon (1950—51) did not discuss 'ande' cultivation at all. Kandyan Peasantry Commission discussed only the perpheral problems of the ande system. Early years of independence was a period of confrontation between Marxists and traditional liberal leaders or United National Party (UNP). The first attempt to regularise the ande system, The Paddy Lands Act of 1953 can be interpreted as an attempt by the UNP to—contain the growing pressure from the Marxists' (Peiris 1976).

Some of the writings on the ande system in Sri Lanka suggest that it was a patron-client relationship. Leach (1961) found that the tenant was a close relative of the owner. While Wimaladharma and Clifford (1973) showed that the blood relationship and marriage alliances were the basis of most of the ande tenancies. However, Sarkar and Thambiah found that this relationship was feudalistic. ARTI (1975) study too showed the conflictual relationship between these two categories.

Ande system shows diversity in different parts of the country. In the Southern part of the island where there are relatively large extents of paddy land absentee landlordism is dominant. Here the conflicting interests between the parties are more severe than in the rest of the country.

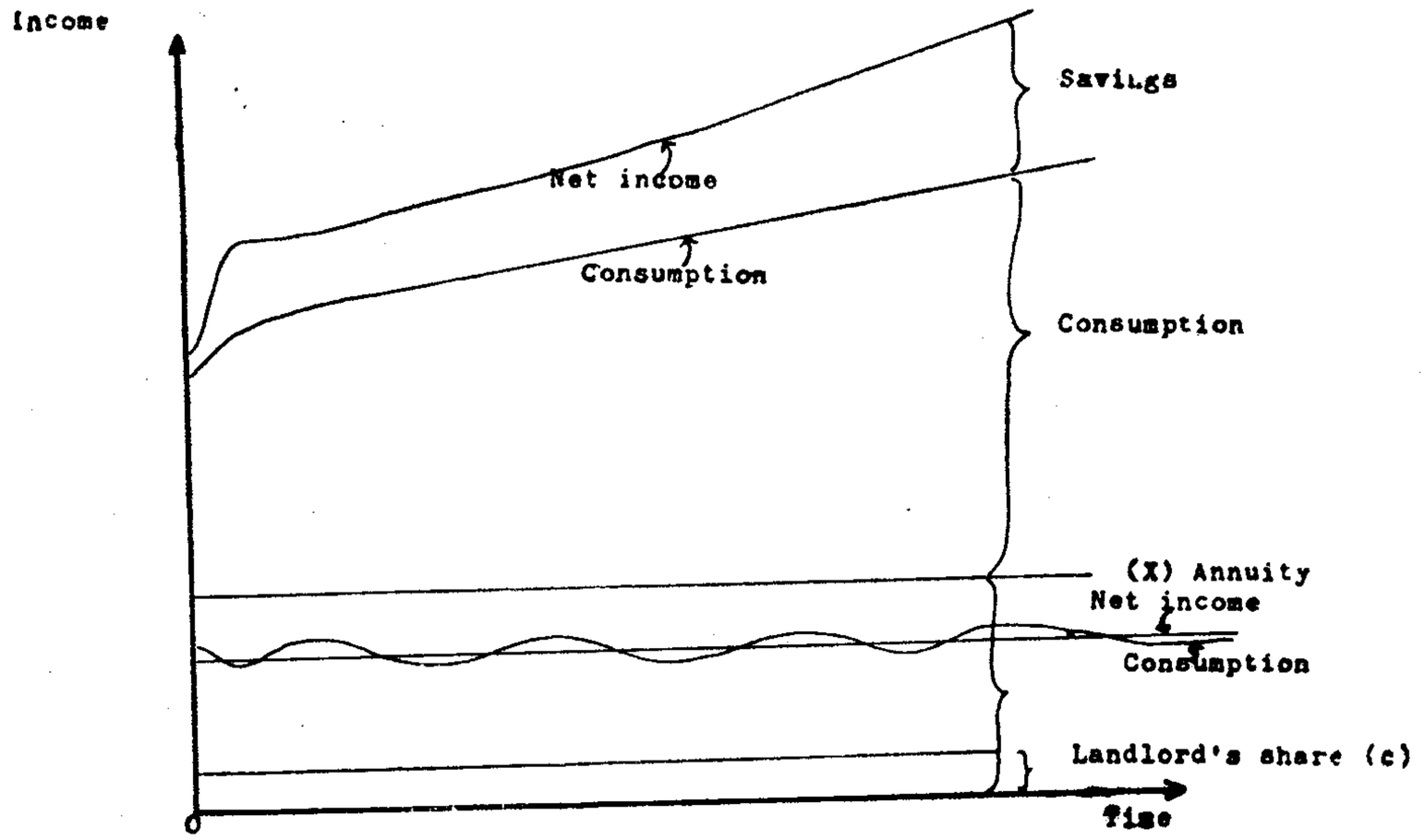
An Initial attempt was made at tenure reform on paddy lands in 1953. The Paddy Land Act of 1953 included provisions for tenancy arrangements to be written and registered; to grant security of tenure for a five year period. However, this piece of legislation was more a recognition that tenure problem existed rather than a serious attempt to remedy it. The main objective of the

Figure 1



OWNERSHIP OF LAND, SIZE OF THE HOLDING, PRODUCTIVITY OF LAND AND TOTAL OUTPUT

Figure 2



NET INCOME, CONSUMPTION, SAVINGS AND LANDLORD'S SHARE
BEFORE AND AFTER REFORMS

Paddy Land Act of 1958 was to provide security of tenure to tenant farmers and regulate tenancy rents. It did not however, attempt to give and to the tiller' or abolish tenancy in order to provide incentives for efficient cultivation. However, this law confers on tenants permanent, transferable and heritable tenancy rights subject to the payment of the prescribed rent. For the first time, share cropping was legally recognised, by fixing the maximum share of the landlord ie, 15 bushels of paddy or one fourth of the total output, whichever was lower, and the 'ande' cultivator was liberated to some extent by that act.

According to Senderatne, the Land reform Law of 1972 influenced the tenure structure only marginally as the ceiling on the extent of paddy land ownership was set at a relatively high level of 25 acres. Only 23,000 acres were expropriated and alienated to cultivators. (Senderatne 1974).

The figures in Table 1 & 2 show that none of these measures were able to solve the main problems of the farmers, and the land fragmentation and tenancy arrangements have further intensified over the years. In 1946, 212,151 acres of paddy land were under share cropping. This rose to 320,074 in 1982. According to a FAO report marginalisation and polarisation processes have been in operation in the agricultural sector for quite some time and are still in operation (FAO 1982) Agrarian structure immediately before the land reforms in 1972 was such that the State had the largest share of the land, followed by ; the peasant sector, next plantation production sector; and in the peasant sector there has been the Monastic and Nindagam Landlordism,[1] The occupier of the last category were required to perform various services and suffered various economic and social disabilities and were subject to extreme poverty.

Total cultivable land in 1982 was 3,547,326 acres, of which about 34%, was under paddy, which is the staple food. The total acreage under paddy according to 1982 Agricultural Census was 1,213,089 acres. The distribution of paddy land according to the size of the holding is given in the table 1. The distribution of paddy land according to the ownership of land is presented in table 2. Nearly 28% of the paddy holding come under share cropping or 'Ande' cultivation practice in 1982 as against 24% in 1946.

Now let us apply our model to Sri Lanka. The average price of an acre of paddy land was about Rs. 40,000 in 1980s and early 90s, and hence Pl = 40,000. According to the Paddy Land Act the owner was entitled for one fourth of the output or 15 bushels. of paddy per acre, whichever was less.[2] Hence, the rent or the share that the landlord is entitled to, that is c, can be estimated by using the 15 bushel of paddy bench mark. The guaranteed price of paddy (gps) in 1990 was Rs. 110 per bushel.

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1. Nindagam is land given by the king to his subjects in return for the services performed to the palace and temples.
2. This was amended in 1990 and the present position is that the landlord is entitled to one fourth of the output without a ceiling.

According to the Department of Agriculture the market price of a bushel of paddy in 1990, ranged 125 to Rs. 186. here the price of paddy and average yield are different the price of land too varies. Information about different prices of both paddy and land and also their correlation is not available. Hence, the best price of paddy we can use is the guaranteed price, which is uniform throughout the country and is changed only by administrative decisions

The value of the rent or share of the landlord per acre of paddy land c, is Rs. 1650. This works out to about 4% of the value of the land. (c/Pl=4%) Once land is owned by the tiller it is assumed up to 8% of the value could be extracted for the development fund, of which only 4% is paid to the former owner and the balance gets accumulated in the fund. Let us assume x = 8% of Pl or less than 50% of the total output (Rs. 3300 per acre, per annum). The average rate of return on investment in the formal sector is around 20%, ie, r = 20%. From these figures it appears that the rate of return on paddy land in Sri Lanka is only one fifth of that of owning financial assets.

The average productivity of paddy land in Sri Lanka in 1990 was 60 bushels per acre, per annum. That means 30 bushels, per acre, per annum could be obtained from the tillers if a viable plot of land is transferred to the actual cultivator. This does not mean that 30 bushels are extracted from all farmers. If the yield is lower the instalment gets reduced accordingly and vice versa. Although this looks a difficult task as it covers a significant portion of total output, in fact 50% of the output, the tillers are in a position to pay it now because —

(*a*) they now own larger holdings and their total net earnings are much higher than the previous income hence, the surplus is also higher,

(*b*) when the tiller becomes the de-facto owner he would aspire to become the (de-jure) legal owner. In order to do this he is bound to increase his income. He is motivated to work harder. Hence, there is a greater chance that the average productivity will improve and the percentage of the output that is paid by the tiller to the fund gets reduced.

(*c*) these instalments are paid only for a short period of time and the disutility is only for a short term whereas the utility improvements run for a much longer period.

TABLE 1

Share of area of agricultural land (small holdings) and the distribution of paddy area under each size class

Size Class		Acres Area Agricultural	%	Area Paddy	%
Less than 1/8	[			718	0.1
1/8 to less than 1/4	[	91091	2.4	4718	0.4
1/4 to less than 1/2	[			29638	2.4
1/2 to less than 1		186462	3.8	107552	8.9
1 to less than 2		484328	9.9	210267	17.3
2 to less than 3	[			250757	20.7
3 to less than 4	[	1382896	28.4	198101	16.3
4 to less than 5	[			80772	6.7
5 to less than 7	[			133157	11.0
7 to less than 10	[	811054	16.6	60071	4.9
Total		4877358	100.0	1213081	100.0

Source : Census of Agriculture 1982

TABLE 2

Area of paddy holdings by type of ownership

Area of paddy land

Year		owned by the operators	owned by others	Total	
		(1)	(2)	(3)	(2)/(3)
1946	—	495525	212151	899970	0.24
1982	—	892957	320074	1145727	0.28

Source : Census of Ceylon 1946
Census of Agriculture 1982

TABLE 3.

Net Income per acre of the paddy farmers in few selected districts

		Net Income per acre Rs.	
		including imputed cost	**excluding imputed cost**
Irrigated :			
Hambantota	..	5266	6616
Polonnaruwa	..	4243	5947
Kalawewa	..	4987	7097
Kurunegala	..	6173	9945
Gampaha	..	1341	3946
Rainfed :			
Kandy	..	759	5359
Kurunegala	..	3104	7294
Kalutara	..	1155	2928
Gampaha	..	1371	5984
Galle	..	239	1496

Source : Cultivation of Agricultural Crops, Yala 1990.
Department of Agriculture, Peradeniya, March 1991.

TABLE 4

The landlord's share c,	(15 bushels)	Rs. 1650
Proposed instalment per annum	(30 bushels)	Rs. 3300

Rate of return on investment in the forma' sector 20%

Annual interest income and payments per acre of land,

		income	**interest**	**net gain**
1st year	..	00	1650	—1650
2nd year	..	660	1650	— 990
3rd year	..	1320	1650	— 330
4th year	..	1980	1650	330
5th year	..	2550	1650	900
6th year	..	3210	1650	1550
8th year	..	3870	1650	2220
9th year	..	4530	1650	2880
10th year	..	5190	1650	3540

per acre :

Total value of the interest income	..	23310
Total payments as land rent or share	..	16500
The balance	..	6710
The accumulated value of the instalments	..	80000
Total accumulated resources per acre over the period of ten years	..	86710
Average per annum	..	8671

Source : Author calculations

Table 3 shows the net income of the farmers in Yala season in 1990 as estimated by the Department of Agriculture. The net cash income excluding imputed cost in irrigated land is quite substantial, ranging from Rs. 9945 per acre in Kurunegala District to Rs. 3946 per acre in Gampaha District. However, a substantial fraction of the net income is imputed cost. Even if half of the net income paid as instalments, farmer's economic position is now superior because he has a larger holding which ensures larger total income. The viable holding after the reform of ownership is fixed at 3 acres.[1] This involves not only consolidation of parcel and micro size holdings but also fragmentation of holdings. This would allow more than six hundred thousand acres (609,469) to be distributed among share croppers and landless peasants (table 1). Roughly about two hundred thousand families would be affected by this reform. In fact, in 1982, 263,019 operators in Sri Lanka did not own land but worked in other's land. These operators could easily be made owner cultivators by distributing excess land which were in excess of 3 acres of holdings. However, if the size of the holding to be distributed is reduced the benefits would be available for a larger number of families but smaller holdings are not vialbe since they do not ensure sufficient income to the farm mily.

The accumulation of capital is shown in the table 4.

Average per annum for 600,000 acres is Rs, 5000 m. The accumulated capital is Rs. 5000 m. per annum. or Rs. 50,000 m. over a period of ten years. This is roughly equal to 2% of the GDP or 5% of the gross domestic capital formation in 1990. On the other hand, if the size of the holding is made larger such a division would benefit only a small number of landless peasants and that would not be a suitable proposition.

This model could be criticised on the ground that the entire burden is placed on the tillers as they are called upon to pay double the value of the land. The justification for such extraction of resources is that these tillers now get security and stable income and the proceeds are spent for the development of the rural area which directly benefit the tillers themselves. However, it is important to note that the total amount paid by the tiller is equivalent to the value of the land, is Rs. 40,000 per acre, paid by instalments over the period,

1. Average annual net income per acre, inclusive of imputed cost, was Rs. 5661, in Yala 1990, This works out to about Rs. 34000 per annum, per farm family after the reforms, which is a reasonable ineome.

at the rate of interest, slightly more than 15% per annum. If he were to borrow the money to purchase this land he would have to pay much higher interest on capital.

If it is felt that such an exploitation is unjustificable this model could be modified to limit the instalment payment by the tillers to 2m. instalments. Then the value of the land gets accumulated, though much less than the previous amount paid, could also be used for rural development. According to the figures used the break-ever point is reached in Sri Lanka in 2-1/2 years, that means, m — 2-1/2 years, and in five years this process could also easily be completed.

Concluding Note :

The above analysis brought to light the enormous resources that are locked up in the archaic tenure system in Sri Lanka. If the government has the political will to enucleate this latent capital, it could not only help to reduce maldistribution of income, poverty, landlessness and economic insecurity but also improvs agricultural productivity and a large quantum of capital could be accumulated for economic development. This suggests that there is considerable unutilised potential in developing countries to the available domestic resources, including motivating human resources to improve productivity for economic development.

Most developing countries are capital constrained, and consequently become the prey of the international financial institutions, in that they are compelled to surrender their automony of decision making on their own domestic economic policies. While admitting that certain quantum of foreign capital is required for development process, we stress the poin t that automony could be regained to a greater extent if all available domestic sources of capital were tapped. We have highlighted one such important source. Vast amount of capital is locked up in the archaic land tenurial systems. If the government has the political will, these latent resources could be enucleated for economic development. It is not only the presence of surplus labour that disguises saving potential as shown by Nurkse, but also archaic tenurial patterns locked up in vast capital under its cover. Once these archaic tenurial systems were removed, not only would the processes of polarisation, marginalisation and destitution in the rural sector be arrested, but the tenants would also be liberated from their shackles. This would result in creating better conditions for sustained growth.

However, certain safeguards have to be worked out by the Agricultural Development Bank, such as to protect the tiller during a prolong drought which could result in a series of consecutive low or zero outputs. In such a situation the tiller might not be able to pay his due instalment in time. Unless the Bank extends a grace period in such an eventuality the whole purpose of the exercise will fail as the tiller will lose the land her tills for defaulting in his payments.

REFERENCES :

Agricultural Training & Research Institute	(1974a)	Cost of Production of Paddy, Maha 1972—73, in Five Districts, Colombo
	(1974b),	Kandy District, Reasearch Studies Serie No. 7
	(1975),	Socio-Economic Survey of the Beminiwa Agricultural Productivity Committee Research Studies Series, No. 11.;
Banking Commission	(1934),	Sessional Paper XX, — 1934. Colombo.
Barry R. A. & Cline W. R.	(1979),	Agrarian Structure Productivity in Developing Countries, John Hooking University Press, Baltimore.
Bauer P. T.	(1946),	The Economics of Planning density in rubber growing, Economica,
Bhaduri A.	(1973),	A Study in Agricultural backwardness in semi-feudalism, Economic Journal,
Cheung S.	(1969),	The Theory of Agricultural Land Tenure, Cambridge University Press, Cambridge.
Department of Agriculture	(1991).	Cultivation of Agricultural Crops, Yala 1990 March 1991.
Department of Census & Statistics,	(1982),	Census of Agriculture, Colombo.
Das Gupta	(1940),	Report on Hambantota District, University of Ceylon, Peradeniya.
Food & Agricultural Organisation	(1982).	High Level Mission on Follow up to the World Conference on Agrarian Reforms in Rural Development in Sri Lanka, Colombo.
Griffin K.	(1976),	Land Concentration and Rural Poverty Review of Economic Studies, 61
Gahatak S. & Ingersent K.	(1984),	Agriculture in Economic Development, Havester Press.
Jorgensen	(1961),	The Development of a Dual Economy, Economic Journal, 71.
Kandyan Peasantry Commission	(1951),	Sessional Paper XVIII — 1951.
Leach E. R.	(1961),	Pul-Eliya, A. Village in Ceylon, Oxford University Press, London.

Lewis W. A. (1954), Economic Development with Unlimited Supplies of Labour, Manchester School

Mackinen M. I. (1973), Money & Capital in Economic Development Brooking Institute, Washington D. C.

Marshall A. (1920), Principles of Economics, 8th Edition Macmillan.

Newberry D. M. G. (1977), Risk Sharing, Share Cropping & Uncertainities in Labour Markets, Review of Economic Studies, 44.

Nurkse R. (1953), Problems of Capital Formation in Underdeveloped Countries, Blackwell, Oxford

Okahawa K. (1972), Differential Structures & Agriculture in Economy in Dualistic Growth, Kinskuuniya Book store Co. Lrtd.

Ranis & Fei (1964), Development of a Labour Surplus Economy Theory and Policy, Homewood, 111 Inwin.

Sarkar K. N. & Thambiah S. J. (1940), Disintergrating Village, University of Ceylon, Peradeniya

Sanderatne N. (1974), Leading Issues in Sri Lanka's Land reforms, Agriculture in economic development of Sri Lanka, Conference Organised by the Ceylon Studies Circle, August.

Sen A. K. (1962), An Aspect of Indian Agriculture, Economic Weekly, Annual Number, February.

Stiglitz J. E. (1974), Incentives & Risk Sharing in Share Cropping, Review of Economic Studies, 61.

Wimaladharma K.P. (1973), & Clifford J. The Operation of the Paddy Lands Act in a village in the North Central Province, Ceylon Studies Seminar, 1973, Series No. 3, University of Sri Lanka, Peradeniya, (mimeo).

Yotopoulos & Nuget (1976), Economics of development, Harper & Row, New York.