

Institute of Economic Development and Research  
SCHOOL OF ECONOMICS  
University of the Philippines

Discussion Paper No. 70-16

July 23, 1970

THE SIMPLE ECONOMICS OF LAND REFORM: THE EXPROPRIATION-  
COMPENSATION PROCESS AND INCOME DISTRIBUTION

by

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## THE SIMPLE ECONOMICS OF LAND REFORM: THE EXPROPRIATION-COMPENSATION PROCESS AND INCOME DISTRIBUTION\*

The classic, and still most commonly-used, notion of "land reform" involves principally the redistribution of ownership rights to land. Such a redistribution necessarily involves some form of coercion<sup>1/</sup>, usually by a government, and therefore requires consideration of the effects of the types of coercive devices used and their appropriateness to the goals specified in the land reform. There also arises the question of compensation to former owners of land compulsorily acquired by the coercing body.

How much compensation should be paid, when, and in what form, constitutes one of the most controversial questions surrounding the concept of land reform. Much of the controversy arises out of conflicting political, economic, and social objectives of the various individuals and groups affected by a land reform program. A part of the controversy also stems from a certain amount of confusion concerning the effects of the implementation of land redistribution and of the level and method of financing the compensation payments. It is the latter area to which this paper is addressed.

The use of some simple economic analysis can help to define the issues more clearly and to show both the usefulness and the limitations of economics in analyzing these issues. The perspective throughout will be that of a developing country considering land reform as a strategy designed to achieve certain political or economic goals. These goals will be different in each particular case, but there are certain general considerations which are applicable even in cases where the goals may be very disparate.<sup>2/</sup> The analysis will be limited, insofar as possible, to questions directly related to the issue of expropriation<sup>3/</sup> and compensation, and will focus on land reform provisions found in the legislation of several Asian countries, primarily the Philippines.

In common with many other land reform programs, the Philippine Land Reform Code (R.A. No. 3844, 1963) carries a provision regarding "just compensation."<sup>4/</sup> The interpretation of "just compensation" varies widely among countries. These interpretations could be divided into five major categories of payment for compulsorily-acquired land. In descending order of compensation per unit, they are

1. Above-market price,
2. Market price,

3. "Formula price," the two most common examples of which are some multiple of the annual crop or rent, or payment based on taxable value of land,<sup>5/</sup>
4. No compensation (outright confiscation), and
5. Negative compensation, i.e., confiscation plus a penalty, such as exile, imprisonment, or execution of former landlords.

In practice, the first alternative is almost never considered. Countries which choose alternative 3 sometimes make an attempt to have the formula price approximate the market price, either by setting the formula to produce this result, or by first forcing down rents or increasing land taxes to reduce the market price near that dictated by the formula.

The tools of economics are inadequate to determine what is "just." Setting the level of compensation is usually a politico-legal process (often involving strong constitutional challenges) that only incidentally concerns itself with economic considerations. Even if the economist is ignored in the process of establishing the general formula for compensation, he can nevertheless contribute to

the analysis by pointing out some of the important micro- and macroeconomic effects of the expropriation-compensation process and the methods of financing used or contemplated in its implementation.

The use of even the simplest of economic tools, the supply-demand analysis, can point out the effects of certain land reform provisions and give a basis for judging their relative effectiveness, as well as allowing the prediction of some important side effects. Important as a foundation for this analysis is the consideration of the market value of land. Standard textbooks tell us that land has value because it is scarce and can produce an income. The market price of land may be higher than the current rental capitalized at prevailing interest rates because of lower risk in landholding, because of expectation of future increases in the income it will produce, or because it may have some consumption value.

The determination of the value of land in the market occurs through the interaction of supply and demand. The fact that some landlords are unwilling to sell at the current price,<sup>6/</sup> while some potential purchasers cannot afford to buy at that price shows nothing more than the standard divergence of supply and demand curves beyond the intersection point.

The purpose of a land redistribution may differ among countries, but the proximate goal is in all cases to effect a structural change in land ownership, transferring more from present owners to other individuals or groups. This can be viewed as an attempt to speed up the flow of landed property between these groups to a rate per unit of time higher than that which the current market produces, <sup>1/</sup> i.e., to shift the intersection of the demand and supply curves to the right. A secondary goal of reform is often to force down the price of land. The analysis will be presented in terms of the number of units of land offered or demanded at a given time at various prices, rather than the fixed-supply-of-land approach commonly used in analysis of land questions.

Using a diagram such as that of Figure 1, we can look at various expropriation and compensation measures in comparative statics terms, to see how they are likely to effect 1) the position and shape of the short-run supply and demand curves, and 2) the location of their intersection. For simplicity and convenience of exposition, we shall initially assume all land is owned by "landlords," and that it is demanded by "peasants," persons who are currently tenants or landless workers. Land will be measured in terms of income-producing units, rather than mere area, to allow the

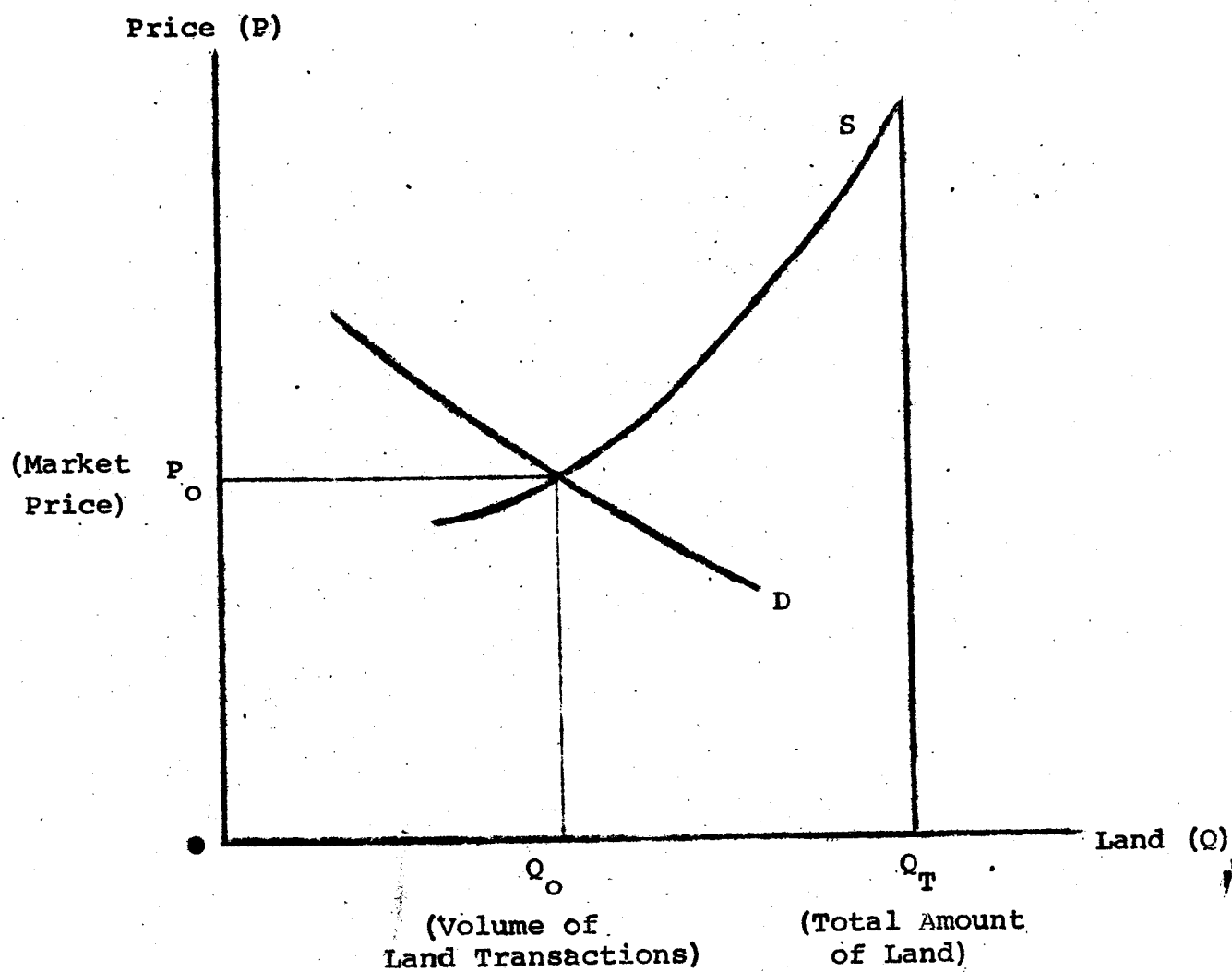


Figure 1

notion of a single market price for the commodity, land.<sup>8/</sup>

The principal policy measures to be considered in part I below are the following:

1. Compulsory sale of land, whether at full market price or some other price
- 2/ Subsidized credit for land purchase
3. Land tax increase or rent reduction
- 4/ Ceiling or minimum on the size of landholdings
5. Restrictions on alienation or purchase of land

Following the analysis of these policies, part II will discuss the effects of various financing methods on the policy outcomes, with special reference to income distribution. Part III will attempt to summarize the conclusions drawn from the analysis.

## I

If landlords are compelled to sell their holdings at the present market price, this is equivalent to forcing the supply curve into a horizontal position for any quantity of land greater than that currently changing hands in the market (Figure 2). Unless the demand for land is perfectly elastic, there will be no more buyers than before the regulation. To accomplish a greater volume of transfers, some-



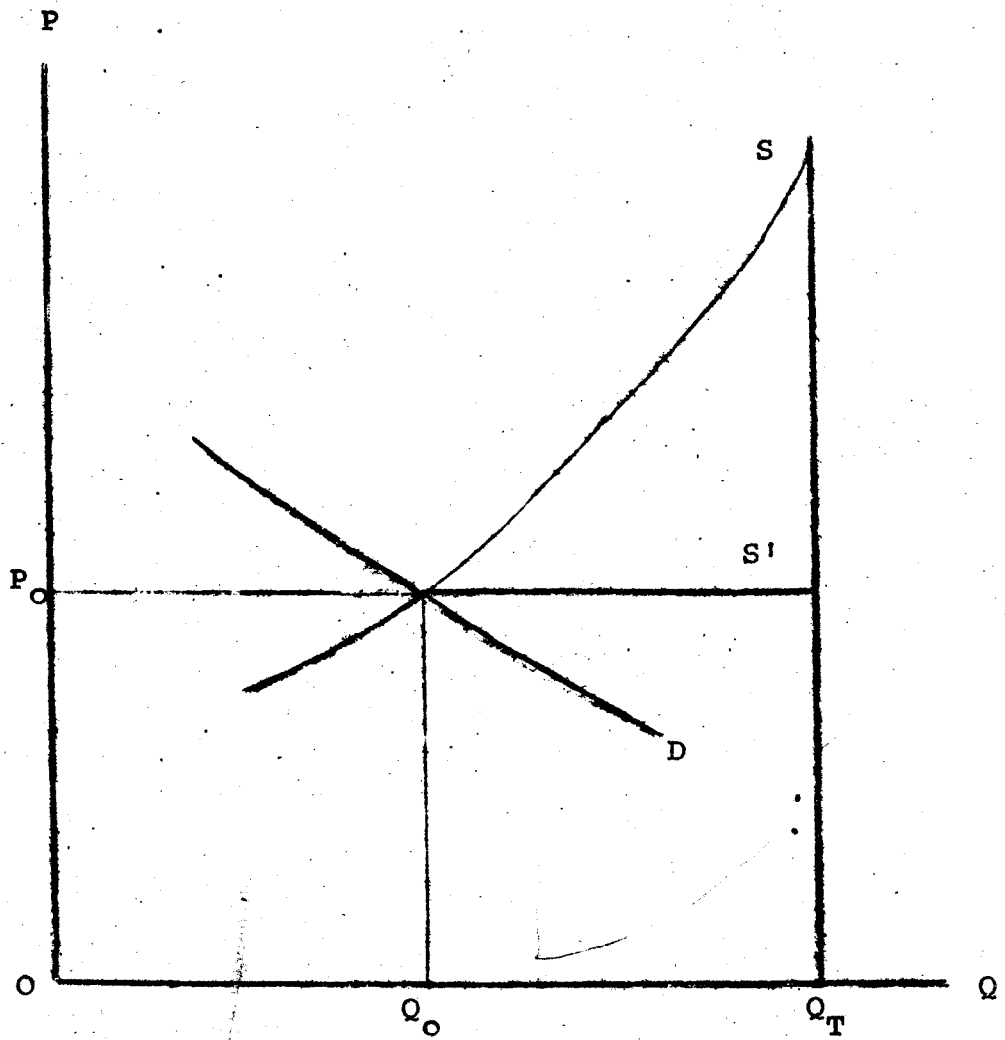


Figure 2

thing must be done to shift the demand curve to the right. Typically the shift is accomplished through provision of cheaper, often subsidized, credit to the purchasers. Lower mortgage interest rates or other provisions reducing the cost or risk of land purchase increase the expected profitability of land to potential purchasers, inducing them to demand more land at any given price. The amount of land changing hands at the market price,  $P_0$  (Figure 3), would increase from  $Q_0$  to  $Q_1$ .

It is also useful to note that if the cheaper credit were given to purchasers without the compulsory sale provision, land price would rise unless supply were perfectly elastic, and the extra amount of land changing hands ( $Q_2 - Q_0$ ) would be smaller than the increment with compulsory sale. Compulsion would of course be redundant if the supply curve were horizontal initially, but is otherwise necessary if both an increased volume of sales (whether through the agency of government or privately) and a non-increasing price are goals of the land legislation. Moreover, if the government provided a general credit subsidy, in the absence of a compulsory sale provision, the supply curve would shift up,<sup>9/</sup> since the profitability of holding land, and thus its reservation price, would rise for landlords as well as peasants.

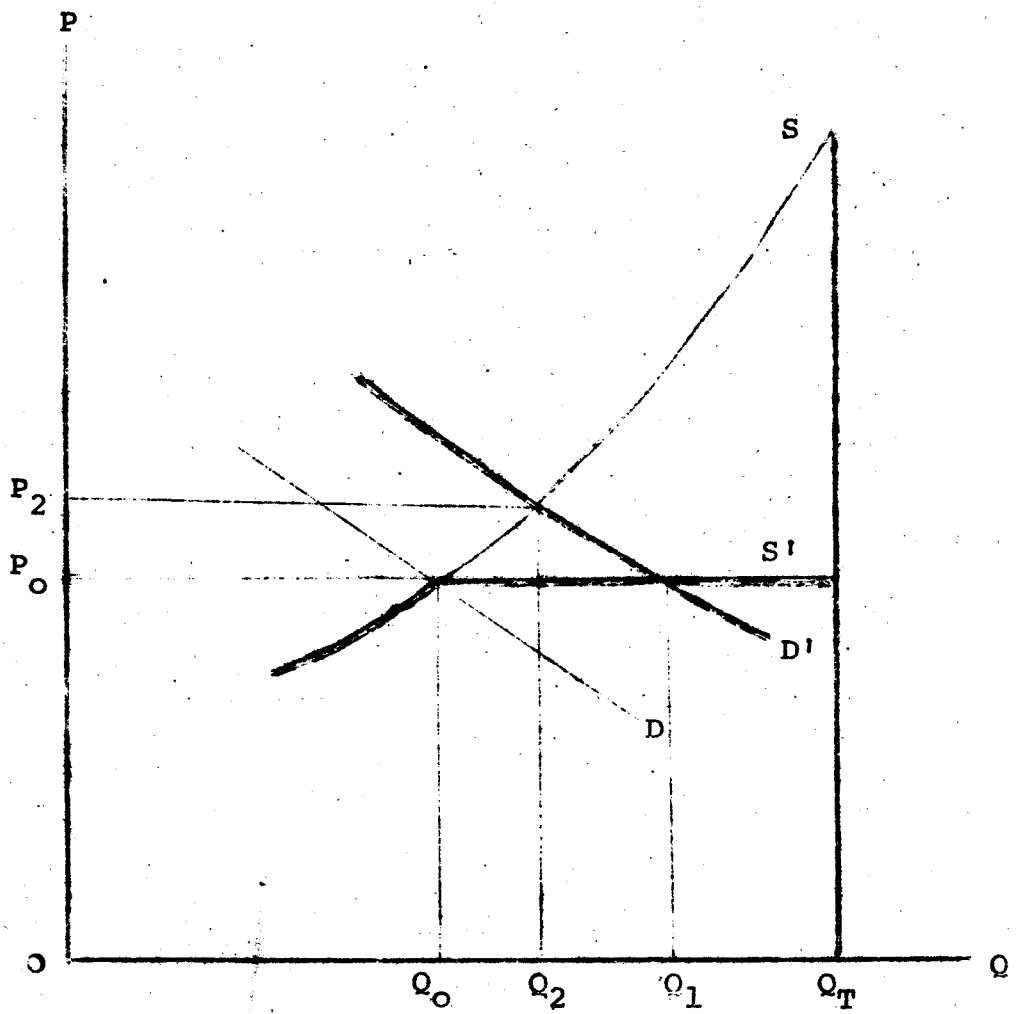


Figure 3

Thus, under the postulated market conditions, compulsory sales at market price would not divert any extra land from landlords to others unless something is done to shift the demand curve for land to the right. If landlords are to be prevented from capturing some or all of the benefits of subsidized credit or other demand-shifting device, the credit must be discriminatory (favoring only purchasers) and some coercion must be exerted on sellers; without this compulsion, land prices would rise. Merely establishing ceiling prices for land will not work. Even if effectively implemented, such ceilings would leave unsatisfied excess demand after the rightward shift of the demand curve, with no increase in the actual volume of land transfers in the market. The primary objective of the market intervention--getting more land to the tenants or workers--would not be achieved.

Suppose, however, that the objective is not only to force landlords to part with more land, but to do so at a price below the current market price. Such a result requires a downward shift of the supply curve. As before, compulsory sales could be legislated, but at less-than-market price (alternatives 3, 4, or 5 of the compensation schemes). In the absence of a compulsory sale provision, increasing the taxes on land or enforcing rent reductions

would decrease the profitability of holding land, and accomplish the desired direction (if not, perhaps, the desired magnitude) of the supply-curve shift. But the demand curve might also shift left, as in the case of a land tax which would also fall on any new owner of land. The new equilibrium would indeed be at a lower price, but could also be at a quantity smaller than that which would have been exchanged in a free market. In such a case transfer of land from landlord control would be hindered, rather than facilitated, as in Figure 4 where the intersection of the shifted supply and demand curves is below and to the left of the former equilibrium position. Such a result is presumably contrary to the major goal of land reform.

A land tax, in order to maximize the incentive for landlords to sell and peasants to buy, would have to be discriminatory, favoring new purchasers. The administrative burdens imposed by such a scheme are likely to be very heavy, and the opportunities for evasion abundant. With good enforcement, however, even a non-discriminatory tax would keep land prices down, at the cost of a smaller, perhaps even negative, increment to the volume of land transfers.

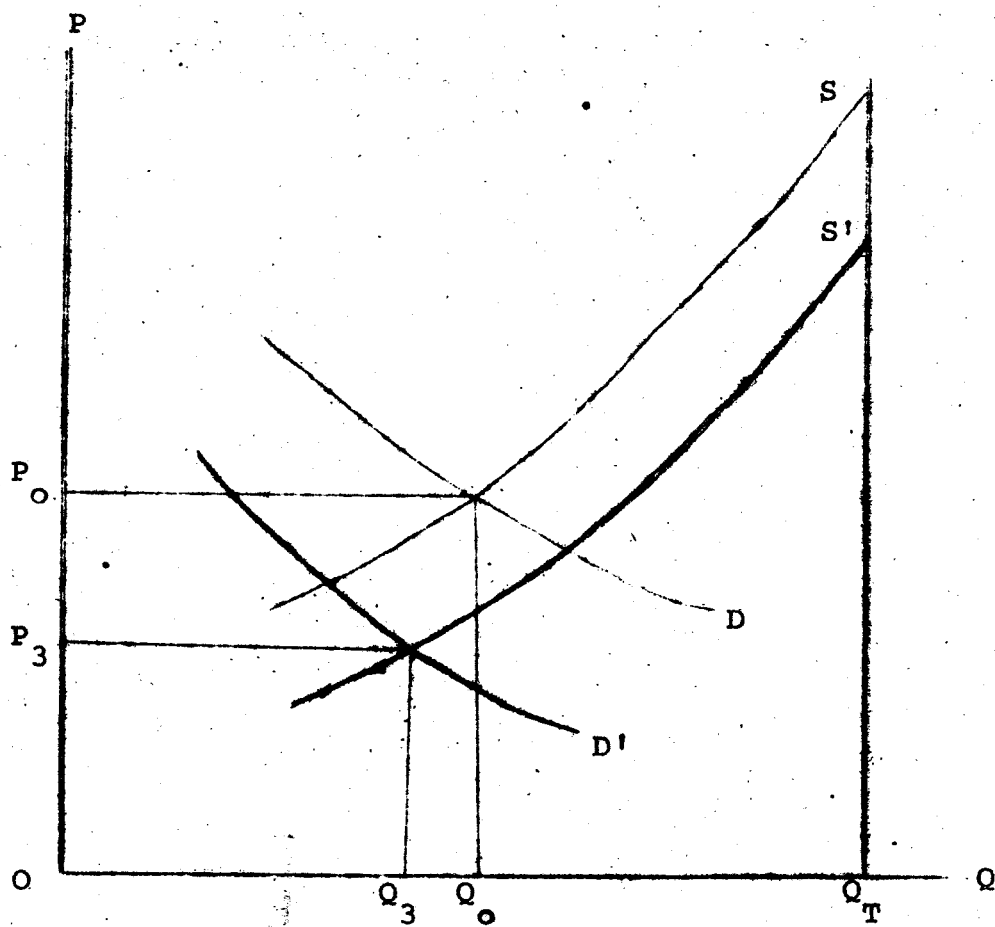


Figure 4

Land rent reductions are automatically discriminatory, though perhaps no easier to enforce than land taxation. But precisely because effective rent reduction increases the income of current tenants out of any given level of gross production, it reduces their incentive to want to become landowners. So despite its quality of discrimination against the landlord and in favor of the tenant, it has the same undesired result as a nondiscriminatory land tax, namely to shift the demand curve to the left. The net result is again, as in the tax case, a lower land price with the possibility of a reduced rate of land transfers as well.

The "pure" case of rent reduction or land taxation produces another interesting sidelight through its effect on the general level of interest rates. Suppose, for simplicity, we assume original market price represents the capitalized value of net rental income only, i.e.,  $P_0 = k_0 R_0$ , where  $k_0 = 1/i_0$ . The reduction of net rental income to some level  $R_1 < R_0$  reduces the profitability to landlords of holding land, shifting the supply curve down. This greater willingness to part with their land has a corollary in an increased demand by landlords for non-land earning assets, assuming no change in savings behavior. Similarly, the reduced desire of current

tenants to purchase land also presages a diversion of tenant savings into demand for non-land earning assets. Thus the portfolio-choice adjustment by both landlords and tenants means a net addition to demand for non-land assets, driving up their prices, which in turn means a reduction in the interest rate. At the new equilibrium in the land market, then, the price of land will be a larger multiple of the net rental than under free-market conditions, i.e.,  $P_1 = k_1 R_1$ , where  $k_1 = 1/i_1$ , and  $k_1 > k_0$  because  $i_1 < i_0$ . Thus the percentage reduction in the market price of land should be less than the percentage reduction in the net rent per unit of land.

A ceiling on the landlord's retained holding (partial expropriation) is a frequent feature of land reform laws.<sup>10/</sup> A landlord initially possessing land in excess of the ceiling must now dispose of the excess at any price he can get. To analyze this case diagrammatically, it is perhaps most convenient to look first at the landlord's reservation demand for land, i.e., how much of his total holding he would keep for his own use at a given price. His reservation demand schedule can be represented as  $p_T a$  in Figure 5A, in which  $Oq_T$  represents his total land holding,  $P_a$  the price at which he would



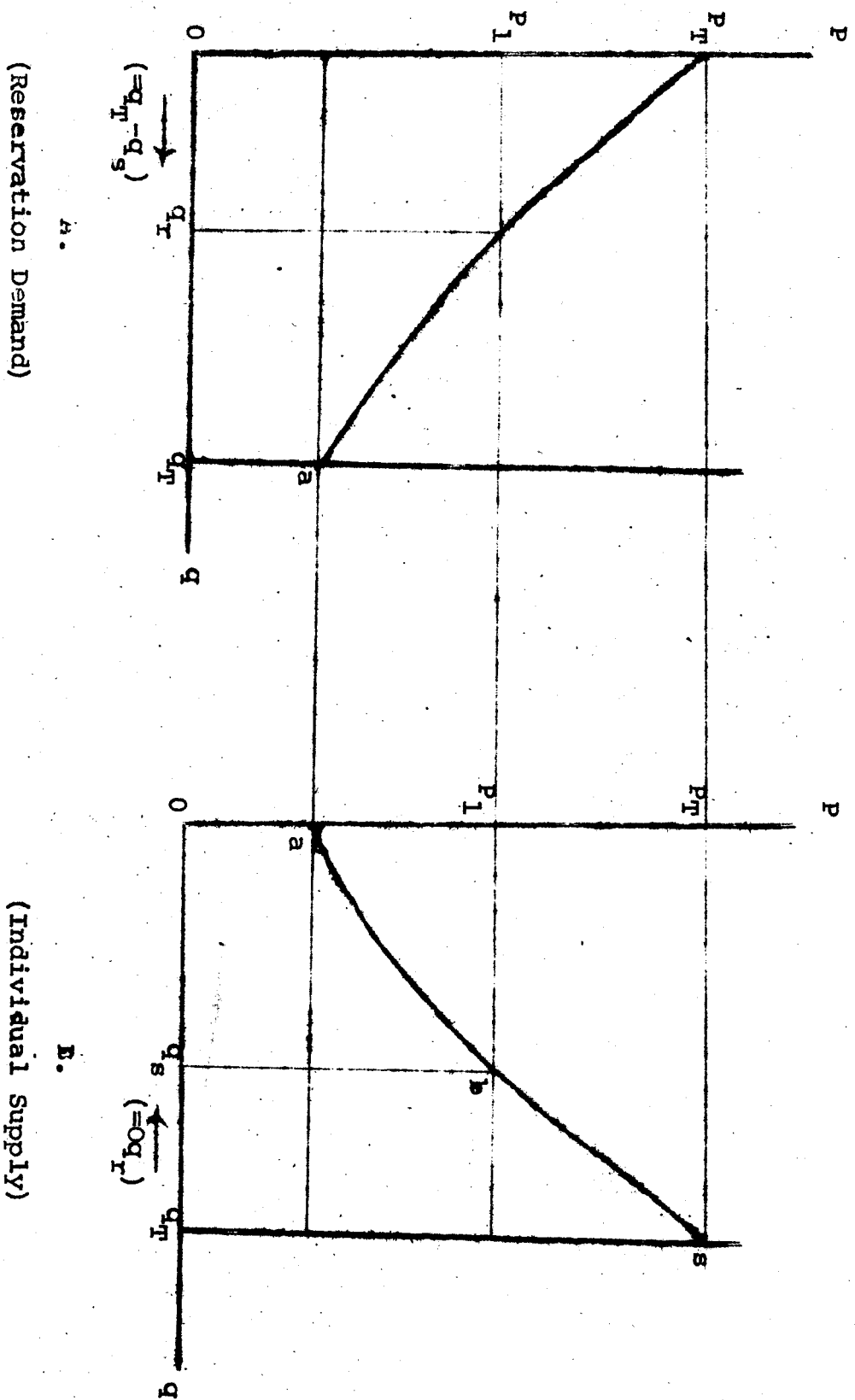
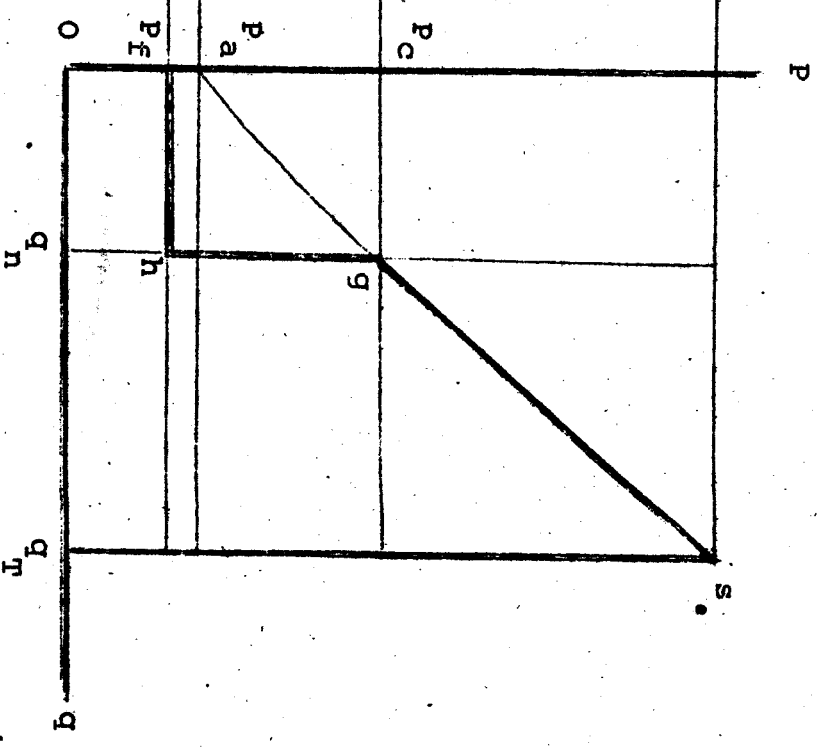
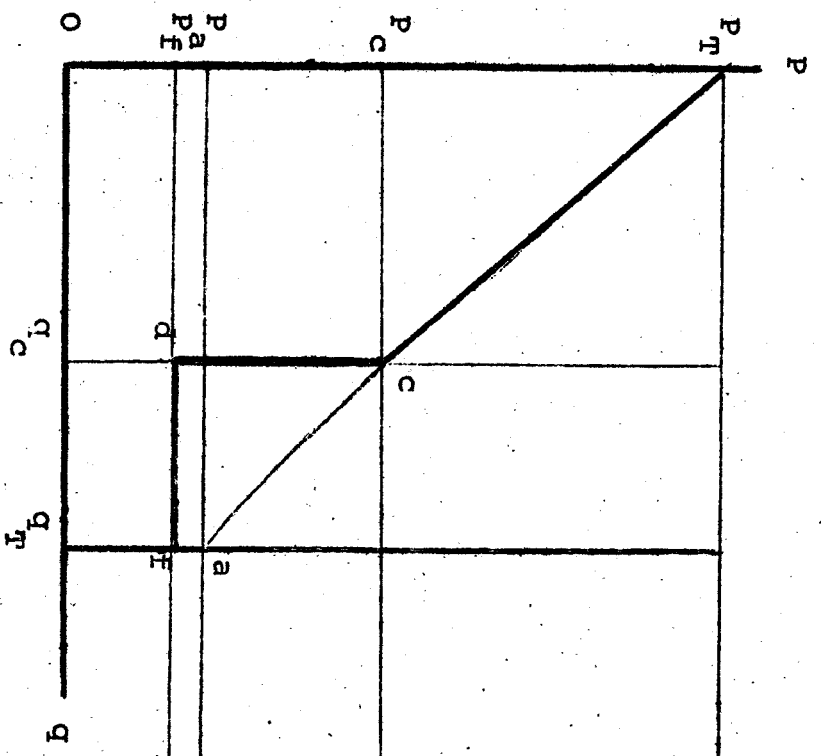


Figure 5

sell nothing, and  $p_T$  the price at which he would voluntarily sell out completely.<sup>11/</sup> The amount he offers for sale in the market at any price below  $p_T$  would be measured to the left from  $q_T$ . This schedule then translates into an individual supply curve of the form  $abs$  in Figure 5B.

Now suppose the government imposes a ceiling on individual landholdings at a level equal to the distance  $Oq_c$  in Figure 6A, an amount less than the landlord's initial acreage. Since he would voluntarily dispose of the excess,  $q_T q_c$ , at any price above  $p_c$ , we need only consider the case where the offer price is below  $p_c$  -- as for example,  $p_f$ . Assume, for convenience, that the offer price,  $p_f$ , is below the level of  $p_a$  from Figure 5A, at which price he would have chosen to keep all his land off the market. The ceiling limit cum low offer price forces his reservation demand into a shape such as  $p_T edf$  in Figure 6A, so the supply schedule assumes the shape of  $p_f hgs$  in Figure 6B.

To get the market supply curve for land, we merely aggregate (add horizontally) the individual supply curves of the present landowners. It is a simple matter to show (but the process will not be detailed here) that the market supply curve has the same general shape as that of the individual landlord.<sup>12/</sup>



(Reservation Demand)

(Individual Supply)

Figure 6

We must now add a demand curve to the diagram in order to show the effects of the ceiling legislation (Figure 7). The post-ceiling supply will lie below the pre-ceiling supply to the left of the quantity  $Q_N$ , which represents the total disposal of excess holdings by landlords at the dictated price. Beyond  $Q_N$ , the post-ceiling supply curve will coincide with the initial supply curve.<sup>13/</sup> The demand curve must cross the supply curve to the left of  $Q_N$ , otherwise the ceiling legislation would have been redundant. If the demand curve lies in the position shown in Figure 7, the government will find buyers at the dictated price for all the excess lands which it has forced landlords to sell.<sup>14/</sup> If it lies to the left of D, the government will find itself holding land which no one wants to buy at the price it paid (except the landlords, who can't get it back, or former tenants, who have reached ceiling levels). These lands could be sold at a loss, given away, or held for public use. If the demand curve lies to the right of D, the government could realize a profit on the sale of the lands which it acquired. If it resells to tenants or laborers at its own purchase price, however, it will find unsatisfied excess demand for these lands, and be forced into some extra-market rationing procedure. The more the other provisions of land

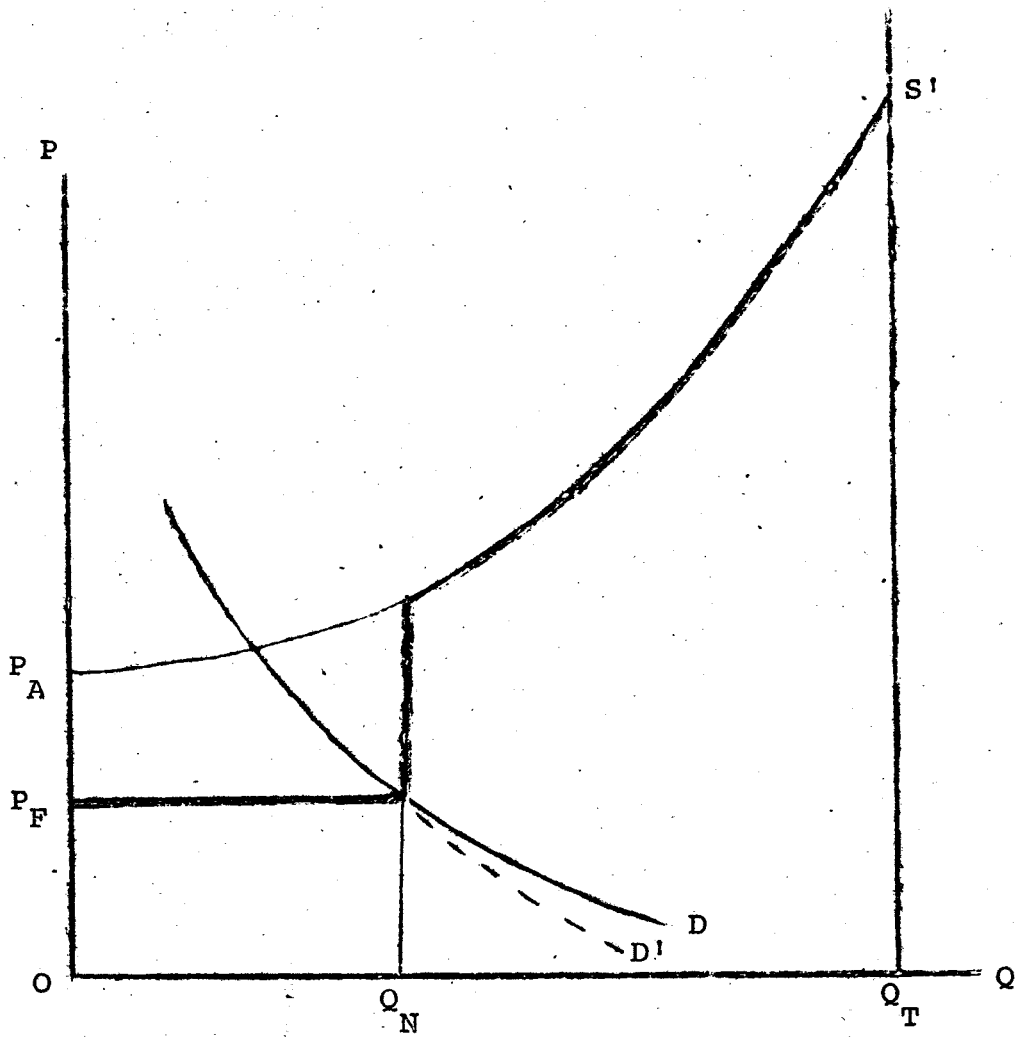


Figure 7

legislation shift the demand curve to the right, the greater the rationing problem will become.<sup>15/</sup>

Some land reform laws which impose ceilings also provide that no holding may be below a certain size. Insofar as even a minimum-size holding is out of the financial reach of some of the potential purchasers of land, the resulting demand curve will lie below the free-market demand over at least the first part of its length. Similarly, if some of the land is initially in the hands of sub-minimum minifundistas, the supply curve of land will be forced into a lower position. Such a minimum requirement may force land prices down; they cannot rise unless some other provision is strong enough to cause a net rightward shift in the demand curve.

Provisions for maximum or minimum size of holdings sometimes are accompanied by restrictions on the alienation of lands transferred into the hands of peasants.<sup>16/</sup> Insofar as such restrictions are effective, they cause the supply curve of land on the market to shift up. If the restrictions are absolute--a prohibition on sale or other alienation of land--they have the effect of shifting the maximum amount of land available for sale in the market to the left, i.e.,

a movement of the point  $Q_T$  toward the origin. If the restrictions merely make it more difficult to alienate the land, the immediate effect may be seen as a shift of demand, or supply, or both. A tax on land transfers, for example, could be treated like any other tax by viewing it as a shift of either the demand curve or the supply curve. Refusing to allow mortgage credit to be extended for a third-party purchase of land newly transferred to a tenant would shift the demand curve to the left. Requiring the seller to go through a difficult administrative procedure to secure permission to sell his land would raise the selling cost, which is in effect an upward shift of the supply curve.<sup>17/</sup> For as long as such provisions are in force, the curve or curves affected will shift in every period.

The foregoing discussion points out the need for a further consideration from which we have so far abstracted, namely an examination of who makes up the demanders and who the suppliers of land at any time in the market. Just as the short run curves will shift according to various provisions of the land reform law, so will they shift as the composition of landholders and potential land purchasers changes over time or as a result of legislation. Present

landlords might wish to be sellers at one price, but buyers at some lower price.<sup>18/</sup> Often land reform programs must contain provisions which try to affect the membership of the demanding and supplying group at various prices. Regulations aimed at preventing the old landlords from repurchasing land to build up their holdings once again are trying to keep this group out of the market on the demand side, just as restrictions on alienation aim at eliminating the beneficiaries of land reform from the market on the supply side.

These latter considerations, when viewed in conjunction with the discussion which has preceded them, point out one obvious but often-overlooked fact. Land reform is seldom aimed at removing imperfections from the land market; on the contrary, most provisions are designed to interfere in, and alter the function of, the market for land. It is therefore likely that land redistribution cannot be simply a one-shot affair, but rather will require continuing long-term supervision and administration to be successful in achieving the goals set for it. As economic development proceeds, the pressures to overturn some of the original provisions are likely to intensify, which requires not only a continuing administrative effort but also a degree of flexibility which many programs do not contain.<sup>19/</sup>



## II

When land is redistributed, so is "power, property, income, and status."<sup>20/</sup> A consideration of the short-run macro-economic effects of the expropriation-compensation process turns mainly around the distribution of income or claims on income. If compensation is paid, it can be in cash, in kind,<sup>21/</sup> in bonds or other securities, or in some combination of two or more of these.<sup>22/</sup> The payment of compensation, in turn, may come from the new landowners' amortization of purchase price (self-financing land reform), from new taxes, from diversion of funds away from other areas of government spending, from borrowing or grants, from credit creation (including the printing of money), or from the sale of government assets.<sup>23/</sup> An examination of the results of the various financing schemes can show quite clearly that the form of financing chosen may have at least as great an effect on the eventual income distribution as the levels of expropriation and compensation themselves; some forms of financing facilitate, and others hinder, the attainment of the land reform goals.

First, some general considerations: Insofar as the supply curve of land is shifted to a position lower than that which it would have occupied under voluntary sales in a free market, and the demand curve cuts the supply curve

along its lowered portion, there is a loss sustained by landowners. The amount of the loss can be approximated diagrammatically by a comparison of the "sellers' surplus" which landlords would have gained under a free market with that which accrues to them after the government intervention.

A rather extreme example can be used to illustrate the points just made. Take the case where landlords are forced to sell all their lands at current market prices. This, as we have seen, requires some compulsion. They would sell out voluntarily only at a price of  $P_T$  (Figure 8), obtaining a sellers' surplus equivalent to the area  $P_AESP_T$ . Selling all at a price  $P_O$ , however, produces a surplus equal only to  $P_AEP_O$ , with a "loss" equal to the area  $P_OESP_T$ . Purchasers, on the other hand, would take the entire land offered only at a price of  $P_D$ . If they could buy at this price, buyers' surplus would increase from  $P_OEP_B$  to  $P_DEP_B$ . The government, through its intermediation in the sale-purchase process, would suffer a financial loss equal to  $P_DDS'P_O$ , so the buyers gain and the sellers lose "surplus" on the transaction. The government also loses - financially - but it has the power to shift some or all of this loss onto

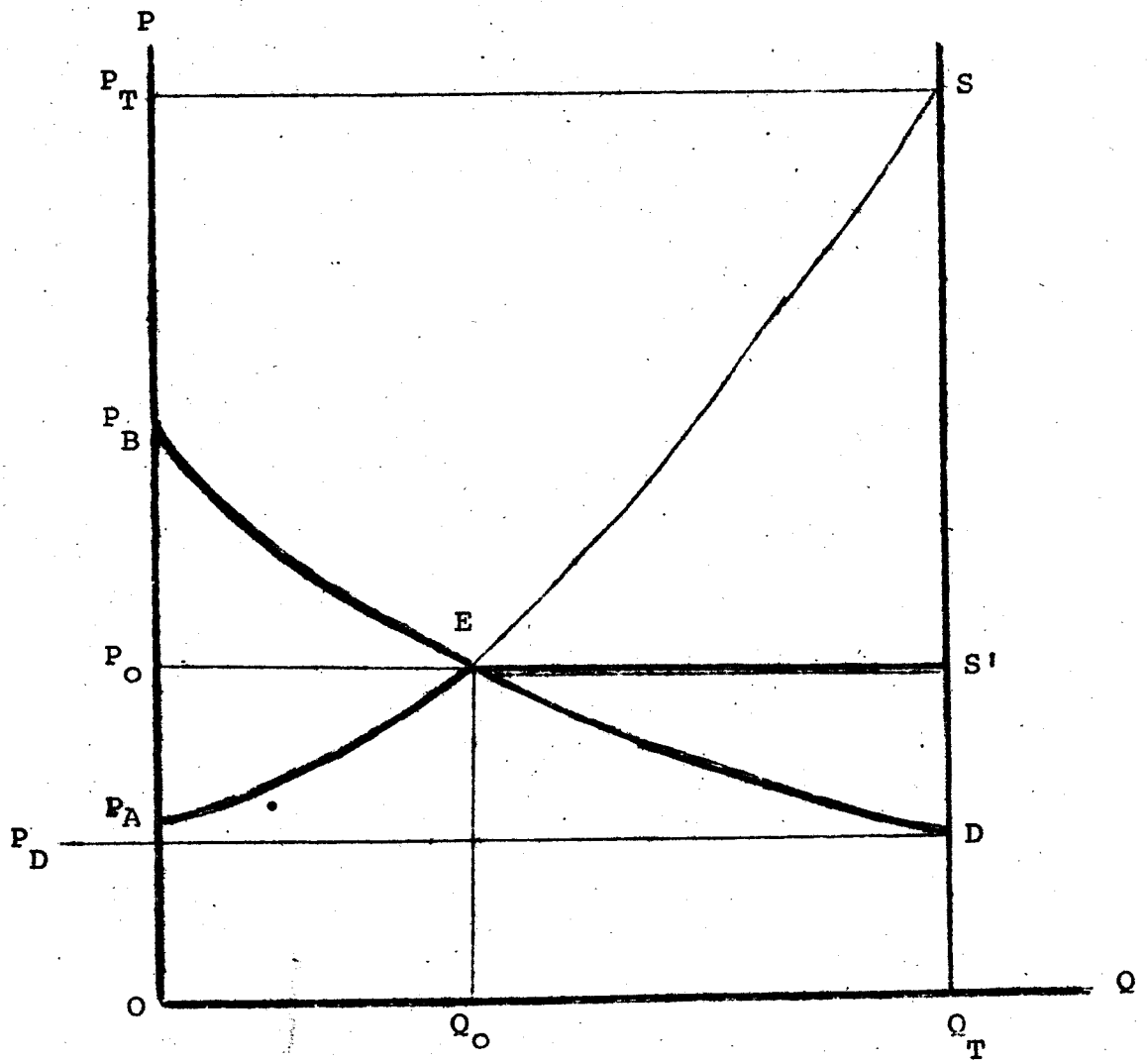


Figure 8

the former landlords, the new owners, or some third group (e.g., city dwellers), according to the way it finances the loss.<sup>24/</sup> The government, as an economic body,<sup>25/</sup> could also decide to bear some or all of the loss itself through a transfer of title of some of its assets to pay part of the cost.

The government could, perhaps, shift the entire financial loss it suffered onto the backs of the former landlords by a special tax -- e.g., a capital levy on the bonds which it issued as compensation for expropriated land. If such a levy yielded just exactly the amount of the government's loss, it would be the equivalent of forcing the sale of land at the price  $P_D$  and turning it over to peasants at that price. This simple example points out that forced sale of a given area of land at the price which buyers would just be willing to pay would not be necessary to ensure that landlords bore the weight of the redistribution scheme. The government has equivalent financial alternatives which would achieve exactly the same result. In principle, the government could even pay the full price  $P_T$  which would induce landlords to sell out voluntarily (i.e., choose alternative 1 of the compensation schemes),

but charge the new purchasers only  $P_D$  to ensure that they bought up all the land, and then apportion the financial loss as it wanted through taxation, inflation, or some other means.

Whatever the origin of a financial loss by government, it has the power to shift the loss to other sectors of the economy (within limits, of course, such as those posed by the threat of revolution). The shifting may be very sharply directed, as in the example of the capital levy on land bonds, or it may be more or less willy-nilly, as in a policy of monetary expansion resulting in general inflation. The essential point is that, given the goals of land reform, the financing method chosen can either offset, augment, or even substitute for the effects desired to be achieved through the levels of expropriation and compensation payments.<sup>26/</sup> Therefore, in analyzing any land redistribution program the provisions setting the levels of expropriation and compensation cannot be viewed in isolation from the financial arrangements made to carry out the process. They must be evaluated as a package,

There is an almost limitless number of compensation and financing schemes which could be chosen. The general choices could be arrayed in a table, as below:

Form of compensation	Method of Financing						
	Amortization payments of new owners	Additional taxes	Borrowing (domestic or foreign)	Monetary expansion	Sale of gov't. assets	Diversion of gov't. spending	Foreign grants
Cash							
Securities							
Kind							

A third, and even a fourth, dimension could be added to the table by considering the level of compensation paid to former landlords and the level of payment required by the new landowners. Rather than examining, in excruciating detail, all of the various possibilities, let us merely comment on a few to establish the general lines of argument.<sup>27/</sup> Take the simple case where the government forces all landlords to sell at the current market price, and gives the land free of charge to the tenants. The redistributive effects of some possible financing schemes are as follows:

1. Payment in government bonds, financed by raising taxes. To the extent the taxes fall on the new landowners, part of the redistributive effect of the land transfer pro-

visions is offset. The incidence of the tax may be partly on landlords, reducing the net level of compensation they receive, or on some third parties, which redistributes income from them to the parties directly involved in the land transfers.

2. Payment in cash, financed by printing money. Inflation is the almost inevitable result, reducing quickly the purchasing power of the cash the landlords received. The former peasants would likely be insulated from most of the deleterious effects of inflation, both because they hold the land asset, a good hedge against inflation, and because the prices of their outputs are likely to rise right in step with the increases in the general price level. City dwellers are likely to pay part of the cost of inflation. If there were idle resources, total output might increase, but this could have resulted from the monetary expansion without any land reform.

3. Payment in cash, financed by borrowing. If the borrowing is done without expanding the money supply, there is an immediate transfer of purchasing power from the lenders to the landlords, but there has also been a redistribution of income from the landlords to the peasants. The short-run effect depends on the propensities to consume of the parties

involved, as well as on the rates of return landlords could receive in non-land investment of their compensation receipts. The ultimate outcome of the process depends on how the loans which the government received to make the cash payments are serviced.

4. Payment in bonds, with redemption financed by diversion of other government expenditures. If the expenditures are current ("consumption") expenditures by government, and if the landlords invest part of their proceeds, there will be a net shift in the composition of aggregate spending away from public consumption toward private consumption, and from the provision of government services toward private investment. This may or may not accelerate growth, depending on whether the government services foregone were productivity-increasing to the same extent that the new investment would be. It seems likely that in fact the outcome would be a deterioration in what a majority of the population regards as essential government services without a compensating improvement in private services. Certainly the amount of services rendered per unit of tax receipts would decline; ultimately this is very similar to case 1, in that tax money is what really financed the compensation payments.



As previously noted, the cases could be enumerated almost endlessly. The four chosen are sufficient, I think, to illustrate the principal points made: 1) that once the level of compensation and land redistribution is set, the government has a wide choice of ways in which to finance this process, and 2) that the choice of financing methods can make the income redistribution inherent in the land transfer process more drastic or less drastic, or even reverse it. As we get beyond the short run, the changes in the disposition of aggregate income as between savings, consumption, and taxes can influence both the pace and character of economic growth even beyond those changes which would occur because of changes in the level and composition of agricultural output as a direct consequence of the land reform.

There remains, of course, a host of unanswered questions, only a few of which can be touched upon briefly in this paper. First, there exists an idea that landlords' capital "tied up" in landholding can be diverted to productive use in the form of increased investment in industry. This is a common misconception, <sup>28/</sup> and therefore needs to be examined carefully. Use an extreme case for a basis: all landlord holdings are confiscated, with no compensation payment, and given to the tillers. There is no change in the capital stock

available to the country, and the effect on industrial investment in the future depends on whether or not the new landholders will use the income from the land differently than would the former landlords, as well as on whether or not agricultural output, and therefore income, would increase or decrease under the new farming system.

Suppose compensation is paid, however. Does this alter the situation fundamentally? The landlords are issued some financial instrument (cash or securities) in exchange for their land. If the landlords use the entire proceeds to purchase new industrial capital equipment, and the securities were financed by borrowing from other members of the economy, all that has happened is that someone else's investible savings were transferred to landlords, who became the investing agent for these funds, but no increase in net investment has occurred. If the landlords invest the entire proceeds as before, but the compensation is financed by a tax falling on other persons, the consumption expenditures of those taxed will be reduced, as will their savings. In this case, the proportion of investment out of a given level of income would be increased, because someone's consumption standards were depressed. This is a result of the tax, not of the land

reform. The tax proceeds could have been invested directly by the government. Again, the landlords have merely acted as agent for transmission of someone's savings into investment.

If, on the other hand, landlords consumed a high proportion of the proceeds, or of the income from the new assets they had purchased, and the persons taxed had a lower propensity to consume, ceteris paribus, the proportion of savings (and therefore of investment) in any given level of income would decline, again because of differences in the consumption/savings behavior of the groups from whom and to whom the wealth or income was redistributed. If this were so, net investment in industry would be curtailed, rather than enhanced, by "freeing up" the "idle landlord capital tied up in land."

In Taiwan, it was realized that the feasible objective was to interest landlords in industrial entrepreneurship, and not that by some magical process part of the value of an existing asset could be turned into a new investment good.

✓ "...The Government decided that the landlords should be encouraged to interest themselves in industrial development by converting their landholdings into industrial holdings."<sup>29/</sup>  
To accomplish this, existing shares of State-owned corporations were transferred to private ownership through the compensation process. This did not directly increase the capital stock

of the country, but rather, "transfers of the four public corporations have smoothed the way for private enterprise."<sup>30/</sup> Landlords' participation in industrial enterprise was certainly increased, but not as a result of any increased level of net investment--there was merely a change of ownership of existing assets. The increase in the landlords' ownership share was the decrease in the government's share. Only insofar as this gave an incentive for landlords to change their behavior to invest a larger share of future incomes in industrial projects would there be any net increase of investment in industry by landlords.

Payment of compensation is merely the exchange of a financial asset for an existing real asset, which has no immediate effect on the level of investment. The level and direction of real investment is affected by the redistribution of income which results and by changes (forced or voluntary) in the consumption-savings behavior of the various groups who benefit by, or pay for, the land redistribution. The proportion of income saved or consumed, and the groups who finally get the benefits or bear the costs of the land redistribution, are determined by the form of financing used. The only way investment out of a given level of income can be increased is to depress the aggregate average propensity to consume.

If compensation payments were financed by printing money, this may cause some previously-idle resources to be employed, producing a higher level of aggregate income. Some of the increase is likely to be invested. If there is no change in the level of real income, however, the money creation will lead only to price increases, which may or may not induce people to invest a greater share of their income. One likely reaction to an inflationary situation would be increased demand for land as a hedge against that inflation. This is not investment in the economic sense; it is merely a process which bids up the price of the existing asset, land. Either of the foregoing outcomes of monetary expansion would occur whether or not there were any land reform. In the first case, the increase in the level of real net investment comes out of the mobilization of idle resources, rather than out of any landlord capital "tied up" in the land.

Would landlords be likely to save more out of any given level of income once their tie to the land is broken? If their new income is lower than their former rent receipts, they might strive to increase income back to original levels through at least a temporary increase in savings rates. Or if the new income is equal to the former rent, but the land-

lords regard it as less secure, they may save more than customary to build up assets to the point where this risk factor is offset. A plausible case can be made, however, that landlords' measured savings out of any given level of money income will fall after they lose their land. Even if the value of compensation bonds issued is equal to the full market value of the land, and the interest income is the same as the former rental,<sup>31/</sup> the landlords may feel that their real levels of consumption have been reduced because they no longer can "consume" landownership. One reason why all land is not offered for sale on the market at the current going price is that some landlords get prestige or other "psychic income" from land for which the current market price is not adequate compensation. The government has foreclosed the opportunity to enjoy this form of income or consumption; how would the landlord likely react? Would he voluntarily reduce his consumption level yet further? Equally probable, it seems to me, would be the attempt to restore at least a part of his former consumption standard through the purchase of other goods and services, although they are not a completely satisfactory substitute for the "consumption" of landownership. In this case, the proportion of consumption expenditures out of measured income would rise, even though the landlord would

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value this consumption less than that which he had previously enjoyed.

Compensation bonds, if made freely negotiable in the market, amount to nothing more than "a kind of second-class currency,"<sup>32/</sup> with the attendant inflationary tendencies. The ability of some real asset (like land) to support a vast mountain of financial paper is unquestioned. One has only to recall the fantastic pyramiding of holding companies in the U.S. of the 1920's to confirm this point. But a new real asset (investment) cannot be created merely by issuing some new financial instrument. Either someone must abstain from current consumption of income in order to invest, or some currently unemployed resources (keeping resources idle could be regarded as a form of aggregate consumption, but one from which very few people derive any benefits) must be put to productive use. In this latter regard, land which is idle may be made to produce and thereby provide a larger stream of income and investment. But again, the investment has increased not because landlord capital frozen into land values has somehow been "defrosted," but because the use of the land services has been changed.



In fact, there is likely to be a transfer of landlord capital from agriculture to industry, but a transfer of a particularly pernicious kind, so far as success of the land reform is concerned. It is commonly observed that with the onset of land reform, loans and other services formerly provided by landlords suddenly dry up. Agricultural fixed capital may stay where it is, but the working capital formerly supplied by the landlords will seek employment elsewhere, and land reform programs must carry various provisions to supply a substitute--typically government credit agencies, special agrarian banks, cooperative organizations, and the like.<sup>33/</sup>

One other possible transfer of landlord "capital" from agriculture to other uses should be mentioned. This the possibility that because of land reform, the landlord may find it more profitable to divert land from agricultural to non-agricultural production. Provisions of some land reform laws encourage such diversion, as for example the following provision of the Philippine Land Reform Code: Tenants may be ejected (with some indemnity) if the landlord or a member of his immediate family "will personally cultivate the landholding or will convert the landholding, if suitably located, into residential, factory, hospital or school site or other useful non-agricultural purposes." (R.A. 3844, Sec. 36).

Foreign financing of land reform efforts may be sought by some countries. These foreign funds (whether grants or loans) are most often earmarked for investment--irrigation, farm machinery, or some other input to agriculture. For land distribution itself, there is no need for foreign exchange, since there is merely a change in ownership of an existing domestic asset, which could be paid for, if any compensation is to be awarded, in domestic currency. But by borrowing abroad, the government could postpone imposing any additional burdens on its own citizens in paying the compensation to the former landlords. No new taxes would be necessary, nor would there be any need to go into the domestic capital market to bid away funds from other uses to the payment of compensation. The government would almost certainly not pay the landlords directly in foreign exchange, to reduce the danger of capital flight. More likely would be payment in local currency (either all at once or over a period of time) obtained by selling the foreign exchange to the central bank. If the central bank held the foreign exchange idle in its reserve accounts, the cash inflow into the system could serve as a basis for a multiple expansion of the domestic money supply. If the central bank resold the foreign exchange to importers for local currency, the money supply expansion would be stopped,

and a higher level of imports would be possible. In effect, then, the government has merely borrowed to finance imports, not the land redistribution.

So a foreign exchange inflow, ostensibly to finance land redistribution, would likely be used in fact either to expand domestic credit creation or to allow the level of imports to rise. The foreign debt must be serviced in the future, which requires the outflow of real resources. If this outflow can come from increased production resulting from higher levels of investment either induced by credit expansion or permitted by increased imports, the country may find it easier to pay the costs of land reform this way rather than by imposing an immediate burden on some or all of its citizens at the time the reform is implemented. Financing land redistribution via foreign borrowing is primarily a method of "buying time."

### III

The analysis of the foregoing sections has attempted, with the use of the simplest of economic tools, to suggest a coherent framework for the analysis of the redistributive effects some of the major policies of land reform. The

conclusions reached are not startling, nor should we have expected them to be. Yet I feel the principal points made to be useful, not only in evaluating the possible effects of certain policies, but in trying to dispel some of the confusion surrounding the issue of land redistribution and its financing.

The most important results are, in my opinion, the following:

1. Land reform policies can be divided into those which shift the supply of land and those which affect the demand. If the primary goal of land reform is to get more land into the hands of the peasants, some of these policies may be viewed as substitutes for each other (e.g., provision for subsidized credit for land purchase and compulsory sales at market prices). If, however, land prices are not to rise, then the policies become complements.

2. Enforced rent reductions and increased land taxes are essentially equivalent in their effects on both supply and demand, even though the former be discriminatory in favor of tenants and the latter not. Neither of these is a sufficient condition for speeding up the rate of transfer of land from landlords to tenants; they will force down the

price, but the volume of transactions may be reduced.

3. The idea that land reform liberates the land market from imperfections and permits it to work more freely is probably specious. Many land reform provisions are designed to circumvent the operations of a free market to eliminate some of its undesirable results; this requires land reform to be a continuing administrative process, and commits government resources to this effort for a long period after the land redistribution has been completed.

4. Perhaps the most important point made is that financing can do what compensation levels have left undone, or undo what the establishment of a certain level of compensation has accomplished. Given the taxing and monetary powers of governments, this renders the argument over whether compensation should be set at full market value rather academic. More importantly, the government has a wide choice of feasible means to achieve a given outcome; it can choose that which minimizes political friction and the use of real resources in carrying out the expropriation-compensation process.

5. The notion that "idle capital tied up in land" can be diverted to industry, thereby increasing the industrial capacity of a country, is a myth. Existing real assets cannot magically be transformed into new assets of a different form. The important determinant of investment is the income-savings behavior of parties affected by land reform. This is not to say there will be no diversion of landlord "capital" from agriculture to industry, even in the short run. But it is likely to be the working capital formerly supplied by landlords which is diverted, as well as some agricultural land which may be put to non-agricultural use to escape expropriation, or because the land reform law has now made the alternative use more profitable.

6. For land redistribution itself, there is no necessity for foreign financing. But borrowing foreign exchange to finance a land reform can be beneficial, in that it postpones the payment of the costs of the reform, and provides the basis for increased investment through the expansion of domestic credit or a higher level of imports. The costs of the reform will be apportioned accordingly as the burdens of servicing the foreign debt are apportioned.

Some minor conclusions include the notion that with rent reduction, the land price will probably not fall by the same relative amount as rent has been decreased; or that both ceilings and floors on the size of landholdings are likely to force the price down, but may or may not help to get more lands into the hands of former tenants; or that putting a ceiling price on land, in the absence of some other provision to shift the supply curve, will not help at all to achieve the primary goal of speeding up the peasants' acquisition of land.

In focusing on short-run redistributive consequences, this paper has ignored two very important aspects of land reform. There is still the unsettled question of timing or speed of implementation. The "go-slow" argument cites the massive amount of resources, both human and material, necessary for successful implementation of wide-scale land reforms. The proponents of quick reform point out that protracted uncertainty about implementation will both reduce the level of investment in agriculture and allow landlords ample time to divert resources toward the subversion of a hesitant program. This argument cannot be settled here.

✓ It may be worthwhile to note, as circumstantial evidence, that those Asian land reforms generally considered successful--

Japan, Taiwan, Iran -- were done quickly. Those which have been protracted -- India, Philippines -- seem less certain of success.

Incentives to greater production and productivity in agriculture can be at least as important as income redistribution. With the new high-yielding varieties of cereal grains becoming more widely available, increased production may even serve -- for a time -- as a substitute for redistributive measures. The "green revolution" can bring more income to share tenants, and thus be popular with them. It is likely to be even more popular with landlords, since they get their share of a larger output, plus a chance to blunt the pressures for land redistribution. It is probably true that the "green revolution" has postponed the adoption of redistributive measures in some Asian countries, and for some time this process may continue. But ultimately, if the concern is for maximum production from agriculture, the "failure to make significant institutional reforms may well be a handicap."<sup>34/</sup> While many of the necessary institutional changes will have to be in the field of distribution (drying, processing, storing, and marketing), I am sure that reform of the structure of land rights will continue to be an issue of importance, and one whose urgency is likely to increase in the next decade.



### FOOTNOTES

\* Visiting Professor, School of Economics, University of the Philippines. Thanks are particularly due to my colleague J. R. Huber, for enduring endless interruptions to discuss points raised in this paper. It is not his fault if mistakes remain.

1/ Presumably, incentives could be given to effect a voluntary redistribution. This would have to be accomplished at land prices considerably above current market levels -- an extremely costly process that ultimately would require greater use of the government's coercive powers in taxation.

2/ Some land redistributions may result, for example, from a revolutionary government's desire to break the power of an old, conservative elite, while others may seek to establish a conservative yeomanry as a stable political force. Since the current paper focuses on the process of expropriation and compensation, and the short-run income redistribution effects which result from it, the analysis (but not its interpretation for policy purposes) can be independent of the final organization sought for agriculture, be it family farms, collectives, state farms, or other form. More narrowly economic goals usually focus on equity, pro-

ductivity increase, or some sort of balance where these objectives are competitive. For a treatment of this latter point, see Vernon W. Ruttan, "Equity and Productivity Objectives in Agrarian Reform Legislation: Perspectives on the New Philippine Land Reform Code," Indian Journal of Agricultural Economics, XIX (July-December, 1964), 114-30.

<sup>3/</sup> Expropriation is defined here as any provision of land reform which forces present landowners as a group to part with some land in excess of that which they would voluntarily have sold at the current market price. Thus confiscation -- taking land but paying no compensation -- is merely one special case of expropriation.

<sup>4/</sup> See for example Leonardo A. Quisumbing, "Compensation in Land Reform Cases: A Comparative Public Law Study," Philippine Law Journal, XLIV (September, 1969), 557-687, wherein the Philippines, India and Puerto Rico are used as illustrations.

<sup>5/</sup> Philippine law requires that the compensation be based on "the annual lease rental income authorized by law, capitalized at the rate of six per centum per annum," but "without prejudice to considering other factors also."

(R.A. 3844, Sec. 56) The rate comes close to implicit rates of capitalization in the land market, but the authorized lease rental has been set at no more than 25% of "the average normal harvest" for the three years preceding inception of the leasehold (Sec. 34). If enforced, this is a considerable rent reduction. The system in Taiwan was essentially similar, except for the rental and interest rates used. The land price was set at  $2\frac{1}{2}$  times the annual main crop yield; since rents had first been forced down to a maximum of  $37\frac{1}{2}\%$  of the annual main crop yield, the procedure was equivalent to capitalizing rental at 15% per annum. See Chen Cheng, Land Reform in Taiwan (Taipei: China Publishing Company, 1961), 18-19, 78. The formula price in Nepal, on the other hand, is set at a maximum of 30 times the annual land tax. See Joint FAO/ECAFE/ILO Seminar on the Implementation of Land Reform in the Far East (hereafter referred to as "Manila Seminar"), Country Paper: Nepal (Manila, July 1969, mimeo), 12.

Basing compensation on tax paid or declared taxable value often contains a rough measure of justice, in that it penalizes landlords in direct proportion to the amount of their undervaluation or underpayment of taxes due.

6/ Hence the need for coercion, even if compensation is to be at "full market value." Doreen Warriner asserts that "any price below the market value of the property represents a degree of expropriation confiscation, as the words are defined in the present paper7/." Doreen Warriner, Land Reform in Principle and Practice (Oxford: Clarendon Press, 1969), 19. Subsequent discussion (part II) will show that compensation even at the full market price represents a degree of confiscation.

7/ The expropriation-compensation process is here treated as an early part of a continuing process of land reform. This early stage may take a long time; a leading critic of the Philippine land reform has claimed that, at present rates, conversion of tenants into owner-cultivators would take some 1300 years. Speeches of Juan R. Liwag, as quoted in Romeo T. Herrera, "Land Reform in the Philippines," Economic Research Journal XVI (March, 1970), 210. The process will, of course, not last that long; it will either be accelerated or reversed within a much shorter span of time.

8/ The principle of measuring land in some sort of productivity units is sometimes used in the implementation

of land reform. The best Asian example is probably the Taiwan system, whereby land was classified into 26 grades, and the landlord's retention under the "land-to-the-tiller" program was limited to the equivalent of 3 chia (nearly 3 hectares) of 7th to 12th grade paddy land. (Land to the Tiller Act, Ch. II, Article 10) See also S. K. Shen, "Administration of the Land Reform Program in Taiwan," in James R. Brown and Sein Lin (eds.), Land Reform in Developing Countries (Hartford, Connecticut: The University of Hartford, 1968), 408. The notion of the "standard acre," such as in used in India, and which depends primarily on the presence or absence of irrigation, is also a step in the same direction. Since the Taiwan grading system takes into account not only yield from the land but also such things as nearness to a road. (Interview with S. K. Shen, Director, Taiwan Land Bureau, Taipei, 16 April 1970), it comes close to the ideal concept for economic measurement of "land." Nepal, recognizing the impossibility of a fine grading of land without the underlying cadastral survey, has opted for a rougher system utilizing only four grades, to proceed in concert with the survey now under way. (Interview with J.R.G. Harrop, Survey Director, Kathmandu, 20 May 1970).

9/ Given the type of supply curve used, it is inappropriate to think of supply shifting to the right or left; it must shift up or down. The standard terminology of rightward or leftward shifts will be retained only for the demand curves.

10/ As previously mentioned (footnote 8), retention limits were set at the equivalent of 3 chia of medium-grade paddy land in Taiwan. Individual limits are set at 75 hectares in the Philippines (R.A. 3844, Sec. 53) on land covered by the reform provisions. The limit in Japan was generally one hectare of tenanted land or three hectares of owner-cultivated land (See Takekaza Ogura, "Economic Impact of Postwar Land Reform on Japan," in Brown and Lin, eds.), 231, while in Nepal it has been set at 16.4 hectares + 2 hectares homestead (Manila Seminar, Country Paper: Nepal, 3). It is quite clear that in Japan and Taiwan the limits were set low enough to reduce rental income to minimal levels, forcing former landlords to find other sources of livelihood. In the Philippines and Nepal, it seems that limits are more directed toward leaving a landlord enough land to provide him a relatively comfortable income even after expropriation of his excess.

11/ This sell-out price may be extremely high; similarly  $p_a$  for many landlords may be well above the existing market price for land.

12/ If the dictated price should be above the price at which some landlords would have voluntarily sold some or all of their excess, then there will be an initial sloping portion to both some of the individual supply curves and the market supply schedule. This does not materially change the analysis.

13/ If the conditions of footnote 12 were satisfied, and some landlords would have voluntarily sold more than their excess at the imposed price, the point  $Q_N$  would lie to the right of the position shown in Figure 7. Again, there is no significant change in the analysis. If, however, the landlord's reservation demand is not for a certain absolute number of units of land, but is in some relative terms (e.g., a certain proportion of his total holding), then the remaining sloping portion of his individual supply curve will shift position, which also affects the position of the market supply curve. If he wishes only to retain a certain proportion of his holding at each price between  $p_a$  and  $p_T$ , then once he has given up the excess over the legislated ceiling, the sloping portion of curve would likely begin at a level  $p_a$  at quantity

$q_n$  and rise more steeply to reach the level of  $p_T$  at point s on Figure 6B. This behavior is possible, but I consider it very unlikely. Perhaps more likely would be for the landlord to hang on even more tenaciously than he would have before to the amount of land he has left after divesting himself of the excess, which is the equivalent of an upward shift of the supply curve beyond point g. Only some further provisions making landholding less attractive than before would be likely to shift this sloping portion down.

14/ Some potential purchasers might be willing to buy more than the allowed ceiling at the imposed price. This would not be permitted, and therefore would have the effect of shifting demand to the left, as might be shown by  $D'$  in Figure 7. The change in position could take many other forms of course, but over some of its length the new demand schedule,  $D'$ , would lie to the left of the old demand,  $D$ .

15/ The special extreme cases would be a zero price or a zero ceiling. The problems would be larger, but the analysis remains the same, except that it would be extremely unlikely that all the land could not be disposed of at a zero price.



16/ Section 62 of the Philippine Land Reform Code forbids alienation except by heredity for a period of ten years past the date of full payment for land received under provisions of the Code.

17/ Even after the lapse of the ten-year absolute prohibition on alienation of lands acquired under the Philippine Land Reform Code, "any transfer, sale or disposition may be made only in favor of persons qualified to acquire economic family-size farm units in accordance with the provisions of this Code." (R.A. 3844, Sec. 62) Taiwan forbade the transfer of land before its price was fully paid, and then only "when the transferee can cultivate it himself or it can be used for industrial or constructional purposes." (Land-to-the-Tiller Act, Ch. IV, article 28). Japan does not permit buying land to rent it out (Ogura, 131).

18/ This would show up on the diagram (Figure 5A) as an extension of the "reservation demand" beyond  $q_T$ , showing that the landlord would change from a net seller of land to a net buyer as the price drops below  $p_a$ .

19/ Changes in the structure of demand may bring great incentives for commercialization of a much larger share of agricultural production, but the process may be hampered

by difficulties in agglomerating and combining small production units set up by an earlier land reform. In Japan, the ability "to get rid of petty farming and move into an entrepreneurial agriculture" may now be severely circumscribed because "the transferability of farm land is still limited, making it difficult to overcome the petty and dispersed landholdings." Takekazu Ogura, Agricultural Development in Modern Japan (Tokyo: Fuji Publishing Co., 1968), 95, 100. Amendments to the Basic Land Law are being considered by the Japanese Diet to remedy this situation (Mr. Hiroo Ishii, Agricultural Land Division, by Ministry of Agriculture, interview 6 April 1970).

20/ Edmundo Flores, "The Concept of Land Reform: Its Relation to Agricultural and Socio-Economic Development," Philippine Economic Journal, IX (First semester, 1970), 111.

21/ A recurring proposal for payment in kind in the Philippines involves swapping public land on the remote and sparsely-populated island of Palawan in exchange for tenanted private land in densely-populated central Luzon.

22/ Compensation in the Philippines is to be paid 10% in cash, and the remainder in tax-free bonds of the Land Bank (R.A. 3844, sec. 80). The tax-free provision

on both principal and interest removes one of the advantageous by-products normally accruing to a government which pays compensation. For, "...once government starts to pay large sums to former landlords by way of interest or bond redemption it has a formidable fiscal device by which to levy a tax on 'unearned income.'" Archibald M. Woodruff, "Financing of Land Reform," (Manila Seminar, July 1969, mimeo), 23.

23/ The contemplated sale of military base land in metropolitan Manila to finance land acquisitions by the Land Bank is just such a case.

24/ This again points out the fallacy contained in statements like that of Edmundo Flores, who writes that

"if land is purchased at market value--rather than expropriated--this represents not land reform but a mere real estate transaction. If proprietors receive cash compensation, there is an income redistribution effect only to the degree to which cash compensation is inferior to the current market price of land....Productive land must be taken without immediate compensation (his italics). Otherwise it is not a redistributive measure."

Edmundo Flores, "The Economics of Land Reform," International Labour Review, XCII (July, 1965), 28, 30-31. For further comment on this point, see S. M. Eddie and F. S. O'Brien, "Note on the Economics of Land Reform," Land Economics, XLIV

(November, 1968), 516. Similar, and to my mind equally erroneous statements can be found in the law literature on land reform, e.g.,

"... land values -- whether or not calculated by capitalizing earnings -- are likely to be high enough that their recapture, through taxes or other periodic payments by the beneficiaries, would consume a large portion of the income the land produces .... and, to the extent that land values might be juggled downward for the benefit of beneficiaries who may have to pay for the land, the owners' property would be confiscated. Thus it is readily seen that in a land reform the goals of compensation and increased economic equality (his italics) are, to a significant degree, inconsistent."

Kenneth L. Karst, "Latin American Land Reform: The Uses of Confiscation," Michigan Law Review, LXIII (December, 1964), 360. Karst's statement contains at least two errors -- the first is the assumption that the beneficiaries must ultimately pay the compensation; the second is the failure to see that transfer of land at artificially-reduced prices is a direct transfer of income or wealth from former owner to land reform beneficiary.

25/ It may be useful to point out here that the government does not just act as an agency for society as a whole or for some groups within it. Government may have its own preferences, goals, and constraints limiting its action. For an interesting discussion of this viewpoint on govern-

ment in less-developed countries, see S. Hymer and S. Resnick, "Interactions between the Government and the Private Sector: An Analysis of Government Expenditure Policy and the Reflection Ratio," in I.G. Stewart (ed.), Economic Development and Structural Change (Edinburgh: Edinburgh University Press, 1969), 156-80.

<sup>26/</sup>Viewed in this light, the constitutional debates and litigation over whether or not compensation must be at full market value are rather academic. The government's power to tax is seldom questioned, and "full compensation" -- paying market price -- can be offset to a large extent by an appropriate tax. The resources tied up in contesting the compensation issue might be better employed in enforcing other land reform provisions.

<sup>27/</sup>For further comment along the same general lines, see Eddie and O'Brien, 516-18.

<sup>28/</sup>Flores again: "There has to be a transfer to industry and trade of capital originally tied up in land." Edmundo Flores, "The Concept of Land Reform . . .," 112-13. The discussion of this point owes much to talks with my former colleague, Donald F. Gordon.

29/ Chen Cheng, 68.

30/ Ibid.

31/ These values and payments could be in kind, as was the case in the Taiwan land reform, to obviate the consideration of reduced purchasing power through inflation.

32/ Karst, 341.

33/ A particularly interesting provision which expressly attempts to stem the outflow of landlords' working capital is Nepal's compulsory savings scheme. To provide a source of funds for short-term agricultural loans, landlords were required to contribute 10 rupees, and tenants 5 rupees, per bigha of land as compulsory savings. Passbooks were issued, interest was paid, and the funds funnelled through ward committees and village cooperatives to supply tenants' working capital needs. (Interview with K. P. Rizal, Land Reform Department, Kathmandu, 19 May 1970).

34/ Clifton R. Wharton, "The Green Revolution: Cornucopia or Pandora's Box?", Foreign Affairs, XLVII (April, 1969), 467.