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# Theory of Devaluation*

*Dr. Muhammad Moqueem Shaikh***

The basic aim of devaluation is to correct a chronic deficit in the balance of payments of a country. Inspite of the use of the concept of devaluation[1] in economic literature in the nineteenth century, its use as a deliberate policy for correcting the disequilibrium in the balance of payments and maintaining exchange stability has been a twentieth century phenomenon.

Up to the 1930's, variations in the exchange rate for correcting the balance of payments were mostly determined by market forces. If a country was facing a deficit in the balance of payments and could not fill the gap by borrowing, or could not correct the deficit by other fiscal and monetary measures, then its currency would depreciate in the international market. Thus, there was little need for any deliberate change in the exchange rate to be brought about by the authorities at that time.

However, the great depression of the 1930's and the development of Keynesian Economics brought to light the role which a government can play in such economic matters. The experience of the 1930's[2] indicated that the exchange rate determined under the paper standard cannot be left to the chance play of market forces. Because of too many fluctuations in the exchange rates and their disastrous consequences during this period, faith in the free market mechanism for exchange parities was shaken. The currency exchanges of the 1930's

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1. Outome of freely fluctuating exchange rate or adjustable 'peg' at that time.

2. Yeager (1966), pp. 312-33.

brought this lesson home to governments that any system of exchange rate parities decided by international consultation and collaboration would be better than the parities determined either by market forces subject to speculation, or by individual and isolated acts of a sovereign state. This resulted in the management of flexible exchange rates, because it was considered that flexible management of exchange rates by isolated and uncoordinated national actions would work very badly.

Thus the era of paper standards and managed exchange rates was ushered in during the 1930's. The abandonment of the gold standard by a number of countries under the pressures of great depression in the economies and the deteriorating conditions of the balance of payments in these countries led to monetary nationalism and exchange control restrictions. International monetary consultations and collaboration became significant for fixing the exchange rates. The debasement of coins or actual depreciation of monetary units was replaced by the devaluation of currencies. The role of market forces in deciding parities was minimised. Deliberate 'pegging' of rates became the rule rather than the exception.

Furthermore, out of the very debris of the depression, the superstructure of the new approach of devaluation and its impact was erected. Aided by Keynesian Economics, the theory of devaluation was developed with a new perspective. Classical and Neo-Classical economists regarded it as a 'price-specie-flow' theory and used it as a 'price mechanism' measure for correcting the balance of payments. However, modern economists from 1950 onward stressed the need of its 'income effects'. That is how the economists swung from the one extreme of considering 'price-effects' only, to the other extreme of stressing 'income-effects' while largely ignoring the price-effects.

It was only after World War II that attention was given to finding a new approach to the whole question of devaluation and its impact on the general economic activity in a country. Previous theories based on price-effects or income-changes were suitable in isolation. Their knowledge can be a good guide, but is not adequate to the analysis of modern economic phenomena. A marriage of two approaches with a new blend was needed to visualise the effects on the economy simultaneously. In the following pages we discuss the two approaches critically, and the new combination of them, examining their simultaneous effects on the economic activity in a country.

The two approaches are usually named the 'elasticity approach' and the 'income-absorption' approach (by Alexander), but there are other names assigned to them Machlup called them 'relative-price' and 'aggregate-spending' approaches They can also be referred to as 'supply-and-demand' and 'income-and-outlay' approaches, or according to the history of economic doctrines, they can be called 'Marshallian' and 'Keynesian' approaches, respectively. However, we shall generally refer to them by their usual and traditional names i.e , "the elasticity approach" and "the income-absorption" or simply "absorption approach".

*2.I. The Elasticity Approach*

Before we discuss this approach, we should be clear about the concept of elasticity and its meaning in the present context. Usually elasticity of demand or supply of any commodity is defined as the proportionate (not absolute) change in the quantity demanded or supplied in response to a certain proportionate change in the price of that commodity.[3] In algebraic from, it is written as,

$$\frac{\triangle Q}{Q} \div \frac{\triangle P}{P} \text{ where}$$

$\triangle Q$ = change in the quantity demanded or supplied.

$\triangle P$ = change in the price of the commodity.

Q = quantity demanded or supplied before the change.

P = price of the commodity before the change.

Geometrically speaking, the elasticity of demand is similar to the slope of such a demand curve. Algebraically, the slope is expressed as $\triangle Q/\triangle P$, where $\triangle Q$ and $\triangle P$ represent changes in the quantity and price as before. The slope of a curve gives the indication of a trend in quantity changes in response to change in prices : yet it measures changes in absolute terms, while elasticity of demand (or supply) is defined in terms of relative changes i. e., $\frac{\triangle Q}{Q} \Big/ \frac{\triangle P}{P}$ or $\frac{\triangle Q}{\triangle P} \Big/ \frac{P}{Q}$ instead of $\triangle Q/\triangle P$ (slope) only.

Therefore, we have to multiply the slope by the ratio of price/quantity (P/Q) for finding the correct measure of elasticity, because we shall be interested not merely in changes in quantity and price, but also in the whole area of rectangles under $\triangle Q$ and $\triangle P$ to find

3. Shaikh (1967), pp. 150-163.

the net gain or loss after the change in price and quantity. These areas can be found by multiplying $\triangle Q$ with P and $\triangle P$ with Q in respective cases, where P and Q are the price and quantity of the commodity before the change, respectively.

The Classical or Neo-Classical or Conventional Approach towards the impact of devaluation remained pragmatic and was suited chiefly to the analysis of the initial or primary effects. It is commonly known as the elasticity approach, for the whole analysis was based on different types of elasticities, e.g., elasticity of supply and demand for imports and exports. It seems appropriate to digress here in order to discuss the mechanism of the elasticity approach briefly before proceeding any further.

*2. 1-a The Mechanism of the Elasticity Approach*

We are aware of the fact that the deficit in the balance of payments arises from an excess of imports of goods and services over exports. That means that the demand for imports is greater than the supply of exports. Thus the devaluation of currency is intended to change demand for imports and supply of exports in order to bring the balance of payments into equilibrium. Such an effect of devaluation on the demand for imports and the supply of exports depends on their respective elasticities.

If these are high or more than unity, then the devaluation effect is supposed to be favourable because, in such a case, the change in the exchange rate, increasing the prices of imports in terms of local currency, will bring a more than proportionate reduction in the demand for imports, while with devaluation, the prices of exports will decrease in terms of foreign currency and thus can induce more demand for exports in foreign countries. This may increase the prices of exports a little in terms of local currency in the short run. As elasticity of the supply of exports is also supposed to be greater than one, therefore more will be supplied in response to higher demand with a little rise in local currency prices of exports. Thus in such a case the balance of payments will have improved after the devaluation.

Similarly it is judged that the balance of payments will deteriorate after the devaluation if the elasticities of demand for imports and supply of exports are less than unity, because demand for imports will not decrease much in response to the increase in local currency prices of imports, while devaluation will not be helpful in increasing

demand and supply of exports much, if their elasticities are lower than unity.

Thus it is considered that the impact of devaluation depends to a great extent on, and can be explained in the light of, elasticities of demand and supply of exports and imports. But these elasticities depend upon many other factors such as income, production possibilities, length of the period, substitution of exports and imports, external competitive demand and supply of imports, internal demand for exportables. the nature of commodities traded, etc. In short, in order to know the elasticities of demand for and supply of exports and imports, we have to know the forces affecting supply and demand conditions of exports and imports.[4]

This elasticity approach alone was used before the Keynesian revolution. Even after the advent of Keynesian Economics, it was the most useful tool in the hands of analysts and economists to find out the impact of devaluation on the economy. It was only at the beginning of the 1950's[5] that S. S. Alexander vehemently attacked the approach and put forward his new mechanism for the analysis of the impact of devaluation. This is known as the 'income-absorption' approach.

According to the conventional approach, devaluation favours those countries, whose sum of elasticities of demand for imports and supply of exports is greater than unity, or when these are simply high, while the countries who have lower elasticities, or inelasticities of supply of exports and demand for imports, will not be benefited by devaluation of the currency. For such countries revaluation of the currency will be advantageous.[6] We have already explained briefly the mechanism of the elasticity approach. Therefore we shall confine our discussion below to the critical appreciation of this approach before critical analysis of the absorption approach.

2.1-b. *Critical Appreciation of the Elasticity Approach*

The conventional approach to the impact of devaluation is simply an extension of Marshallian supply and demand analysis of price and

4 For further concepts and their effect see Ellsworth (1969) pp. 347-56. For detailed implications see Meade (1966), pp.72-4 and 237-47, especially p. 69.

5. Perhaps after the experience of devaluations by the U. K. and other countries in 1949

6. For further elaboration see Ellis & Metzler eds. (1970) (Mrs. Robinson), and Machlup (1940).

production of a single commodity. Doubtless, supply and demand curves are helpful in analysing the forces affecting the price and production of a single commodity, but their application to the analysis of the price and production of foreign traded goods is questionable, because the forces affecting exports and imports are quite different from the forces working in the internal markets. Similarly Marshall's partial equilibrium analysis was considered unsuitable for the determination of total employment and output in a country, and its extension to the analysis of the impact of devaluation will be of limited use.

Apart from difficulties in measuring the elasticities (still unsurmountable), and even controversy about right types of elasticities to be used for the analysis, the elasticities for which the conventional formulas are suitable, should be defined as total elasticities. The partial elasticities, more common, will be of little value. Partial elasticities refer to the responsiveness of a quantity to a change in price only, while other things are assumed to be constant. On the other hand total elasticities, more suitable for the case of devaluation, measure the elasticity, when other relevant things have also changed or are likely to change as a result of the devaluation.

Under the elasticity approach, the costs of production are assumed to be constant. Then, the supply of exports is supposed to be elastic and helpful, for devaluation to have a favourable effect. This means the cost is considered to be constant and definite. However, when the devaluation is affecting the whole economy and demand for various factors is also changing, it is highly improbable that the cost of even a single commodity or factor will remain constant. If certain resources are idle or are released by some industries and employed in other industries, than these may be available at constant prices in the short run, but these will change ultimately and will complicate matters. Therefore the assumption of constant costs is unreal.

Similarly the assumption of given or unchanged income, for any cost curve to be constant, cannot be held good, because devaluation has effects on income also and the income may be higher or lower than before devaluation. Change in income will change the supply and demand curves of factors of production. Even if the money income is not allowed to change, there will be a significant change in the income distribution. Import prices generally rise in terms of local currency with devaluation. The goods concerned might have been important items in the budgets of certain individuals and

organisations. The increase in prices will change their demand curves, perhaps considerably. This argument also makes it necessary to supplement the simple elasticity analysis.

Thus it can be said that total elasticities do not refer only to the change between price and quantity of a commodity, but also to its responsiveness to a change resulting in a new equilibrium of the economy after the devaluation. In such a case the percentage change in price is not generally equal to the percentage change in devaluation; but it depends upon a complicated range of relationships. Hence the total elasticities required for the analysis depend upon the reaction of the whole economic system. Therefore the statement that the effect of devaluation depends upon the elasticities is equivalent to the statement that it depends upon the behaviour of whole economic system.[7]

Similarly Morgan[8] criticises the elasticity approach on rather different grounds. The concept of elasticity of demand or supply of a commodity applies to physically homogeneous goods. Even this elasticity will refer to the change in their prices only; while prices and incomes of other commodities and factors respectively and even other forces remain constant. But exports and imports are far from homogeneous. Moreover the change in the exchange rate not only invokes a response from existing exports and imports and a change in their quantities, but also influences the response from other non-traditional exports and imports.

The fundamental effect of a devaluation is to cheapen domestic factors of production relative to foreign ones. As a consequence, goods of a devaluing country will become cheaper vis-a-vis foreign goods. But the response will not be as simple as that. It may become advantageous now to produce and export new commodities, whose production was not profitable before. Similarly imports of certain commodities may be dispensed with entirely now, because of the possibility of producing import-substitutes within the country. Thus increased production of exports and import-substitutes will increase the demand for factors of production. This will increase their local currency prices relative to other factors.[9] Industries still using relatively

7. Alexander (1952), p. 264.
8. Morgan (1955), p. 284.
9. Of course increase in prices will depend on the elasticity of these factors of production.

cheaper factors will expand, while others dependent on scarce and dear factors will contract. This will bring about secondary and tertiary effects. Similar but reversed results may occur in the non-devaluing countries.

Thus the term "elasticities of demand and supply of exports and imports" is supposed to cover these changes in the re-allocation of resources and re-patterning of industries in the economy as a whole. Any relationship between price and quantity of exports or imports will be usually based on an index of prices. Yet no index is representative of all the changes in exports and imports simultaneously.[10] Hence it is very difficult to visualise the effect of devaluation on the balance of payments or income in any true sense. Because of these short-comings, Alexander suggested quite a different approach for the analysis of the impact of devaluation on the balance of payments.

### 2.2 *The Absorption Approach*

Devaluation is usually viewed as a cure for the deficit in the balance of payments, yet its effects on the economy as a whole are also significant. That is why the balance of payments was considered as "a relation between the aggregate receipts and expenditures of the economy, rather than as a relationship between the country's credit and debit on international accounts".[11] By expressing the balance of payments in a new relationship, the whole economy was brought within the purview of the impact of devaluation, rather than the balance of payments only.

While examining the relationships of real aggregate receipts (income) and expenditures and their relationship to price levels, the analysis of the impact of devaluation should be applied to both the country which has devalued its currency and to the rest of the world. It is generally understood, that the external balance of a country is equal to the difference between total goods and services produced within the country and total goods and services taken off the market domestically i.e., absorbed, according to Alexander. Hence the absorption is equal to consumption plus investment, as ordinarily defined.[12] Moreover the absorption, economists expressed, is the absorption in terms of the following identity.

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10. Yeager (1966), p. 156.
11. Johnson (1967), p. 154.
12. It also includes any change in the holding of inventories in investment.

Balance of Trade (B) = Exports (X) − Imports (M)

Usually, in an open economy

National Income (Y) = Consumption (C) + Investment (I) + Exports (X) − Imports (M)

While according to Alexander

Absorption (A) = Consumption (C) + Investment (I)

Hence the identity of national income becomes

$$Y = A + B \qquad \text{or} \qquad B = Y - A$$

Thus the balance of trade has been expressed in terms of total or aggregate national income, or output and aggregate expenditure or absorption. Now the devaluation can affect the balance of trade via its effects on output (Y) and/or absorption (A). To keep the analysis simplified, any factor affecting the trade balance (B), except those connected with trade of goods and services, will be ignored. No restrictions on trade or payments and no exchange control measures are assumed. Only simple reletionships like single price or single index number of prices affecting the balance will be considered at present.[13]

The analysis is being undertaken with the above identity of balance of trade i.e. $B = Y - A$. Change in the quantities is denoted by small letters. Thus

$$b = y - a \qquad \ldots\ldots(2.1)$$

This means the change in the balance of trade will be equal to the difference in change in output and absorption. Hence the first question about the effect of devaluation will be how it affects the right hand side of the identity i.e. y and a. The above relationships are true in real as well as monetary terms (presently we shall be dealing in real terms only).

First we can visualise that absorption of goods and services depends on the real income ; which is equal to the output of these goods and services. Absorption is also dependent on the level of prices and other factors related to devaluation. So that

$$a = cy - d \qquad \ldots\ldots\ldots(2.2)$$

where 'c' is the propensity to absorb (= propensity to cosume + propensity to invest) out of real income. Here 'd' denotes the direct

13. Even complex relationships can also be represented by the same symbols.

effect of the devaluation on absorption. It indicates the tendency of any change in real absorption at any level of real income, induced directly by devaluation.

The equation (2.2) indicates that devaluation will affect absorption in two parts i.e. 'cy' and 'd' The first part (cy) denotes the change in real consumption and investment induced by the change in real income, which occurs as a result of devaluation. The other part is the change in absorption due to factors other than the effect of devaluation on income. By putting the value of 'a' from equation (2.2) in equation (2.1), we can get another functional relationship.

$$b = (1-c)\,y + d \qquad \ldots\ldots\ldots (2.3)$$

This equation directs us to answer three questions about the impact of devaluation. How does it affect the income (y)? How far will absorption change as a result of change in income i.e. value of 'c'? What will be the magnitude of 'd' i.e. the direct effect of devaluation on absorption? Answers to these questions will encompass the analysis of the entire economic structure of the devaluing country vis-a-vis rest of the world. That will be too difficult and complicated to analyse. That is why some of the simple relationships between various parameters of equation (2.3) are discussed by Alexander and others.[14]

After elucidation of the absorption approach and the functional relationships between various terms of the absorption equation, Alexander proceeds with the summary analysis of the main ideas rather than the complete relationships. He divides the analysis in two parts, i.e. the effect of devaluation on income and on absorption. In the first part he analyses the effects of develuation on income via its effects on idle resources and terms of trade. In the second part, he discusses the effects of devaluation on absorption through its effects on cash balances, redistribution of income, money illusion and other direct absorption effects.[15] There is no need to reproduce the whole argument and his explanations here in the summary discussion on the theory of devaluation. However the gist of these effects can be given here.

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14. These paragraphs are mainly based on Alxander's article on 'Effects of Devaluation on a Trade Balance' op. cit. pp. 263-78.

15. Ibid.

## INCOME EFFECTS

2.2-a. *Idle Resources Effect*

He explains that devaluation will be favourable to the country with idle resources, because devaluation will normally increase the profits of the producers of exports and import-substitutes. This will induce them to produce more and through multiplier increase further production in the country.

As he explains earlier, 'b' can improve if either 'y' increaes or 'a' decreases. Therefore it can be said that increase in output due to devaluation will improve the balance of payments. However its magnitude depends upon the difference between induced output and induced absorption due to increase in income after the devaluation.

Moreover if the propensity to absorb (c) relative to increase in income is less than unity, than the devaluation will be helpful in improving the balance of payments and income in the country concerned. In the absence of these conditions the devaluation will not be of much use. It can even worsen the situation further by resulting in inflation further and thus bringing about a deterioration in the balance of payments.

2-2-b. *Terms of Trade Effect*

Alexander presumes that normally devaluation deteriorates the terms of trade. This is supposed to decrease the real income by 't' in the external sector, which will be a 'deficit' or disequilibrium in the balance of payments. However this decrease in income, through the terms of trade, will decrease absorption according to the propensity to absorb i.e. by 'ct'. Therefore the net effect on the balance of payments will be equal to $t - ct$ or $(1 - c)t$.

If 't' is negative, as given here, and 'c' is less than one, then the balance of payments will deteriorate further. It will improve only if 'c' is greater than one, while the terms of trade deteriorate after the devaluation, otherwise not. Thus he refutes the fallacious argument that deterioration of the terms of trade after the devaluation will generally improve the balance of payments.[16]

16. Because normally devaluation will cheapen exports and increase prices of imports. This will decrease the demand for imports and increase the demand for exports presumably. Thus the balance of payments will improve.

## DIRECT EFFECT ON ABSORPTION

In the case of full, or near-full employment, or if 'c' is equal to, or greater than one, then the devaluation can improve the balance of payments only by reducing absorption. This direct effect is associated with inflation or inflationary pressure generated by the devaluation. It is presumed that consumption and investment have a tendency to decrease with increasing prices of goods and services and thus of factors of production. However this is not a necessary outcome of any devaluation, because if money prices are rising together with the increase in money income, then there may not be any decrease in consumption and investment, or both. However if prices go up faster than the money income i.e. real income goes down relative to price increases, then consumption and investment may be less in real terms.

Thus the change in absorption will be through real income only. Except for the terms of trade effect on income, the real income of the devaluing country is not expected to decline, because, at full employment, money income and money prices can be expected to move together. Thus the direct effects of devaluation on absorption (if any) are through the decrease in real expenditure as money income and prices rise after the devaluation.

For visualising the direct effect of devaluation on absorption, Alexander assumes full employment and perfectly elastic demand for exports and supply of imports. This has been assumed to ward off any income effect through increased production of changes in the terms of trade. Higher domestic prices of exports and imports after the devaluation will initially induce individuals to shift their demand from imports to domestic goods on the one hand, and to export more on the other. This will result in the rise of general prices and money income in the country.

Thus the increased demand for domestic goods will be wiped out ultimately by rising prices within the country and a decrease in price differentials between domestic and foreign prices of exports and imports. If there were no direct absorption effects, domestic prices of exports and imports would continue to rise until there was no tendency to substitute domestic goods for imports or to export more, and there would be no change in the balance of payments any more, as a result of the devaluation.

However, it is taken for granted usually that devaluation, even at full employment level, will improve the balance of payments

through increasing exports and reducing imports. If this is the case, then the absorption must be lower than before. Hence the question arises: how, with given real income, when income and prices rise proportionately in money terms, will real consumption and/or investment decrease? He has divided this direct effect on absorption into cash balance effect, income redistribution effect, money illusion and other effects.

2.2.c *Cash Balance Effect*

The cash balance effect is perhaps the best known direct effect on absorption. In the case of the money supply remaining constant, and the desire of money-holders to maintain cash-balances of certain real value, then with the increase in domestic prices of goods and services after devaluation, they must accumulate more cash than before. This will be possible if they are willing to reduce real expenditure relative to their real income. An individual can increase his cash-balance at the cost of some one else, but the country as a whole cannot do so, unless the banking system or government is willing to increase the money supply, except to the extent of exports sold abroad.

Such reduction in absorption may be directed towards domestic goods and services, while resources committed to their production are not easy to transfer to production of exports and import-substitutes. In such a case, some unemployment may result and this may spread its symptoms to other parts of the economy. If 'c' is less than one, then the net result of this adverse effect on income will be deterioration in the balance of payments which will counterbalance improvement from the direct absorption effect.

2.2 d. *Redistribution of Income Effect*

The redistribution of income effect is also real and well recognised. Prices mostly rise and increase profits of the producers just after the devaluation, while wages lag behind for a considerable period of time. Thus rising prices will shift income from the fixed income class (wage earners) to the rest of the community. Even taxes (progressive) can be expected to take a larger share of real income in case of rising prices. In this way the income will be shifted from the class with high marginal propensity to absorb (due to high marginal propensity to consume) to the group having less marginal propensity in that respect. And to that extent the balance of payments will improve.

But reduction in absorption cannot be a certain outcome of such a shift, because absorption includes consumption as as well as investment.

And it is very unlikely that with the increase in their profits, producers will curtail investment also. However their marginal propensity to consume is supposed to be lower than the wage earners' and to that extent the balance of payments can improve. Similarly if government has less marginal propensity to absorb, unlikely in under-developed countries, then the increase in taxes will also reduce some absorption and thus will have a favourable effect on the balance of payments.

2.2-e. *Money Illusion*

Money illusion will have a favourable effect on the balance of payments provided people pay more attention to money prices than their money incomes. If with higher prices people decide to buy and consume less than before, even though their money incomes have increased proportionately over and above the reduction attributable to cash balances, the result will be favourable to the balance of payments.

But these results will be dubious, because rising money incomes and rising prices may be operating in opposite directions. For example, annual savings may be calculated in money terms and may fail to rise in proportion to money income and prices.

2.2-f. *Other Absorption Effects*

Ther may be other direct effects on absorption, some working in favour and some against the favourable effect on the balance of payments. There may be speculation about the rise in prices. This may increase consumption, at least in the short-run, and thus affect the balance of payments adversely Similarly if investment goods are mostly imported ones, then these may not remain attractive after the devaluation, because of the increase in their domestic prices. More generally, if buyers cut their expenditure on imported goods after the devaluation and save or hoard it instead of spending on other goods, then absorption will be less than before and the balance of payments will improve.

On the other hand there may be temporary and non-proportional effects,for example, the money supply may increase in response to demand for cash balances. Additional absorption can even be financed by credit creation. This will counter-balance the favourable effect of cash balances. Moreover wages may catch up, and the pre-devaluation profits-wages ratio may be restored. Meanwhile, other effects associated with rising prices will disappear with the halt in rising prices.

Thus we can visualise that devaluation can have a favourable effect in a country, where idle resources exist before the devaluation or where reallocation or repatterning of the economy is not only possible but also easy, and where the propensity to absorb relative to income is less than unity. Then the devaluation will be helpful in improving the balance of payments and income in the country concerned. However, if these conditions are not present in the economy at the time of devaluation or afterwards, then the devaluation will be of little use. It can even result in further deterioration of the balance of payments and decrease the 'real' income by inflating the economy too much.

### 2.3. *Critical Review of the absorption Approach*

The absorption approach is a real advancement over the elasticity or conventional approach, yet it seems to be completely 'cut off' from the elasticity approach. This is not justified, that is why it has been criticised by Machlup.[17] Although some of the objections raised by Machlup are unjustified (as we explain later), it will be appropriate to give his main objections here briefly in order to know the vigour of his criticism.

Firstly, Alexander's exposition of the effect of devaluation on income and absorption gives the impression that he has discussed the major effects at least, if not all the effects, (though he did not claim this explicitly). Yet some of the effects have been neglected or ignored.

#### 2.3-a. *The Resources Reallocation*

Real income can be increased in three ways : mostly through fuller use of available and idle resources, their proper, better and economic allocation, and through favourable terms of trade in exceptional cases (to be discussed latter). Alexander has dealt whith two aspects only viz. idle resources (employment) and terms of trade effects. Resources reallocation plays a significant role in his elucidation of the absorption effect, yet he ignored it as a part of income effect. This role is also important. In the short run, employment and the terms of trade effects may overshadow the effect of resources reallocation, but in the long run, especially when the economy is near full employment, only more and better utilization of resources will increase output. All three aspects may be affected by devaluation and may result in favourable and unfavourable effects on the balance of payments.

17. Machlup (1955), pp. 265-75.

2.3-b. *Substitution Effects.*

Devaluation is supposed to increase the prices of imports in terms of local currency. This will induce consumers of imported goods to substitute home-produced goods for these commodities. Thus they will change their budget plans. Similarly demand for exports is supposed to rise after devaluation. This will induce the producers of these commodities to change their plans and try to produce more exportables than goods for consumption within the country. Both these forces will increase the demand for import-substitutes and exportables, and thus their prices, while diversion of resources to external goods will reduce the supply of internal goods and thus the prices of the latter will also rise ultimately. Higher prices will reduce the real aggregate absorption, though it may be a bit more in money terms.

But this decrease in real absorption will be other than that induced by fall in real income; provided some of the recipients substitute consumption and assets (indebtedness) for investment and liquidity. We can interpret the deficit in the balance of payments as an increase in indebtedness or decrease in holding assets by absorbers. Changes in prices of their assets will affect the willingness of the absorbers to increase or decrease their indebtedness or assets. Thus substitution effects may significantly affect the absorption of real income and quantities of imports and exports. But these substitution effects are ignored by Alexander.

2.3-c. *The Terms of Trade Amended*

Ignoring the substitution effects results in another error i.e. the one-sided effect of change in the terms of trade after devaluation. According to Alexander, the initial effect-prior to any income-induced changes in absorption—will normally be equal to reduction in the balance of payments and simultaneous fall in the real income. Otherwise there cannot be any certainty of these effects on the balance of payments and real income being normally equal or in the same direction.

This error was mainly the result of a wrong division of effects into two categories i.e. income and absorption effects. As the terms of trade affect real income, Alexander was quick to put it under the income effect, but he failed to realize its effect on the absorption via relative prices. A change in the terms of trade can be considered a change in the ratio of the price index of exports relative to that of imports. According to Hicks the effect of price changes can be

divided into income and substitution effects. Thus Alexander's conclusion that the ultimate effect of the terms of trade will be equal to the income effect multiplied by the marginal propensity to save or hoard (not to absorb), is not correct.

2.3-d. *Trade Balance in Foreign and Local Money*

The difficulty of 'real' trade balance is not solved by dividing the trade balance in money terms by any deflator (it may even be assumed away). Yet there may be another problem —whether the trade balance should be expressed in terms of foreign money or local money? Usually the trade balance and even changes in it are expressed in terms of local money. The deficit can be more in domestic currency, while it may be less or more in terms of foreign money, especially in the case of a multiple exchange rate prevailing in the country If the value of exports remains the same in terms of foreign money, while the value of imports decreases in foreign money,[18] then the deficit should be less or there should even be a slight surplus in terms of foreign money. But in terms of local currency the deficit may still be large and unfavourable.

2.3-e. *Causal versus Ex Post Relations*

The fundamental equation in the analysis i.e. $Y=C+I+X-M$ is quite helpful in organising the examination of the relationship between parameters of absorption and trade balance ; but it will be misleading, if it is considered to exhibit ex ante (causal) rather than ex post (classificatory) relationships. For example, an increase in government expenditure may be possible by raising more taxes and thus may decrease consumption (C) or investment (I), or increase Y by subsidizing exports and taxing imports. Or there may not be any real change, if prices have risen. There will be many other combinations like that. Such study will be under-emphasised by placing too much reliance on the equation.

The difference between causal and mere ex post relationships can be clearly visualised by asking for the meanings of equation $y=a+b$. If any two of the three terms are known, then the third can be found. That means y depends on a and b ; a on y and b and b on y and a. But this does not mean that any component of the equation depends on any sum or difference of the terms in a causal relationship. Yet the absorption approach does depend upon such relationship, when it requires us to

18. Because of the decrease in demand for imports after the devaluation.

proceed for the effect of devaluation, by analysing its effect on income and absorption. This method of investigation can be extended to find out the effect of devaluation on income and absorption via its effects on the other two components. Such causal equations can be built up for consumption and investment. This type of analysis will not be of much use.

2.3-f. *Implicit Shifts in Emphasis*

The absorption approach and the basic facts on which it depends, are quite impressive for convincing the authorities of the need to cut absorption in order to improve the trade balance. The authorities will decrease consumption and sometimes even investment. But such a policy may be in conflict with other government policies.

Similarly if no loans or investment or repayments are received, then the deficit in the trade balance indicates that some residents of the country (or some authority) are willing to give up foreign assets or reserves. Ordinarily the monetary authorities are willing to sell foreign exchange (gold or other foreign currencies). If these authorities do not offer it or they have nothing to sell, then the deficit can no longer exist. Thus the real problem is not how to wipe out the deficit, but how it can be rendered least painful or injurious to the economy. Because under free market conditions, there will be one exchange rate, at which the import surplus will vanish. It is the extent of required depreciation, which may be quite dangerous for the economy and thus compel the authorities to peg the rate by selling gold or foreign exchange reserves.

With the hoarding or the non-creation of credit, the deficit cannot continue. Every day's import surplus will reduce the money supply in the hands of people and thus will result in a decline in absorption. A continuous deficit in the trade balance, without capital inflow, pre-supposes a policy of enabling the banks to create more credit. The import surplus disappears, when such a policy is discontinued. Such credit expanion, required for financing the deficit, is also necessary for making use of idle resources. Some of the employment of these resources can be financed by hitherto inactive cash balances; but still the creation of new money and credit expansion will be required to a great extent for an expanding economy.

2.3-g. *Assumptions about the Money Supply*

The effects of devaluation cannot be clearly known, unless the nature of the money supply, credit and fiscal policies, is specifically stated.

In the very 'old' economics, the supply of money was considered a variable, dependent on gold stock. This is tacitly being regarded as the dependent variable in the 'new' economics. This should not be so, because we know and understand the necessity of managed currency. Thus money supply becomes a 'policy' variable rather than a dependent variable. That is why one should be more explicit about money supply as a policy rather than merely assuming it as a dependent variable.

Alexander followed this practice in discussing cash balance effects and first indicates that the money supply is inflexible. But in later discussion he did not insist on such a condition, because later on he considered the cash balance effect to be temporary and "money supply may respond to the increased demand for cash balance".[19] As an economist he should have explained 'response' in economic terms.

For example, the increase in the supply of a commodity in response to demand can be explained in terms of higher price, comparatively lower or constant costs, more profitability etc. Similarly money supply can be induced by higher development expenditure, lower reserve ratio, more for transactions or economic activity rather than for war, political or social ends. An economic response will still be a dependent variable ; while a response due to political or social pressures or in anticipation of economic, social or political factors will be considered a 'policy' variable and should be assumed to be such.

Thus the tacit assumption that the money supply will respond to an increased demand for credit[20] will 'rob' the impact of devaluation of much of its meaning. If, the objective of devaluation is full or near full employment through stimulating the production of exportables, it should be the policy of monetary authorities to enhance the chances of more credit supply in response to increasing demand for money. But where the aim of devaluation is to squeeze demand for foreign money or with regard to the foreign trade balance, to curtail the excess supply of domestic money ; a policy of credit expansion for replacing the excess demand squeezed by devaluation is inconsistent—even though it cannot be avoided politically.

2.3-h. *Review of Machlup's Criticism*

Machlup's critical diagnosis of Alexander's absorption approach is quite helpful in understanding the shortcomings of the new approach.

19. Alexander (1952), p. 274.

20. For financing increased wage bills and foreign payments.

Though some of the objections raised by Machlup are quite tenable, a few of them are uncalled for. For example, his manipulation of definitions of various parameters.

Alexander included the resources reallocation effect on the side of effects on absorption. In a way resources reallocation is responsible for the decrease in absorption in one sector of the economy, while it increases absorption in another sector (the external one). Because of more efficient use in another sector relatively, less real absorption (investment) will be required to give the same output, or income will be more than before. In that way the trade balance can improve. Thus the resources reallocation will have the same effect, irrespective of this item being included under the income or absorption effect.

Similarly his discussion about economic response, political ends or policy objective is immaterial. He says that as economists we should clearly mention the type of end or response in view. Economists are not interested in the ends or motives as such. Their main aim is to analyse the response or impact of a certain change or policy. They are not much concerned with the direction, from which the response is coming. And that is also the practical way in most of the sciences.

Moreover his excessive 'hair-splitting' and minute dissection of the absorption approach are not helpful in exploring the full impact of devaluation. If all his objections are accepted and accordingly parameters are redefined and even the new 'policy' parameters which he suggests are incorporated in the model, then this will complicate the matter too much and it may confuse the impact of devaluation totally. Furthermore, such a complete aggregative model is ruled out by Machlup himself.[21]

However, this does not mean that his criticism of Alexander's approach is futile and merely disparaging. He has rightly pointed out many of the over-sights and even pitfalls of this approach. In particular his substitution effect, amended terms of trade, and some of the definitional remarks are quite appealing. Without their inclusion, the absorption approach would be incomplete.

Alexander says that the conventional approach is dependent on the elasticities, which are supposed to be given and knowable; but these are not only difficult to measure, but also are not specifically given. These elasticities also change with the devaluation, whose impact

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21. Machlup (1955), p. 276.

these are supposed to measure. Similar remarks can be given with regard to propensities attached to the absorption approach. These are also assumed to be given and knowable, but they also change with the devaluation. Thus Alexander's conclusion about the elasticity approach that "... the statement that the effects of devaluation depend upon elasticities boils down to that statement that it depends upon how the economic system behaves"[22] is equally applicable to his own approach, because the propensities are also very dependent on the behaviour of the whole economic system.

Apart from this, his overlooking of the conditions of income and propensities in other trading partners is very unfortunate In this real interdependent world, the effect of a phenomenon such as devaluation cannot be worked out in isolation. Such an awareness is not known in Alexander's approach. However, such a concept is present in the elasticity approach i. e. when elasticity of demand for exports and supply of imports from abroad is taken in view after the devaluation.

Actually the controversy about the superiority of one approach over the other is more or less academic. In practice, both are needed as alternatives as well as being complementary to each other, just as right and left foot are required for walking. Though this necessity was not recognised by Alexander, yet elasticities were at work implicitly or explicity in the new approach also. They were functioning implicitly in the case of the idle resources effect. Because it depended upon the magnitude of the expansion in demand and supply of exports in response to devaluation. Similarly these can be visualised in Alexander's statement about the effect of devaluation on the transfer of resources, that it depends on "how the economy responds to price incentives"[23] or "the price differential between the foreign and domestic markets" and "the substitutability of domestic goods for imports in consumption and of resources as between the production of domestic goods and exports".[24] While any conclusion about the terms of trade effect without the recognition of elasticities is unthinkable.

Thus the reconciliation of the two approaches was almost certain and was the expected outcome of such a controversy between

22. Alexander (1952), p. 264.
23. Machlup (1955), p. 262.
24. Alexander (1952), p. 270.

Alexander[25] and Machlup.[26] It ended in a queer compromise proposed by Alexander in the "Simplified Synthesis".[27] According to this compromise, it was suggested that the effects calculated by the conventional approach may be considered as the initial or primary impact of devaluation. It should be multiplied by some 'multiplier' based on the propensities to save or hoard, import etc. (normally less than unity) for finding out the final impact of devaluation.

### 2.4. *A Synthesis*

We have mentioned above that the controversy between Alexander and Machlup ended with the extension of the elasticity approach superimposed upon by multiplier analysis (absorption approach). This type of synthesis was available in Brown's exposition in 1942.[28] In fact it was also mentioned in Mrs. Robinson's pioneering article on 'Foreign Exchanges' as early as 1937.[29]

This superimpositon for finding the impact of devaluation ignores the fact that the multiplier effect of initial change in the trade balance in the course of infinite elasticities of supply of exportables and domestic goods (except imports) in both the countries will change prices still further and will lead to further substitution between imports and domestic goods in the trading countries. Hence if the elasticities' solution is treated as a multiplicand to be multiplied by another coefficient (multiplier) for estimating the effect of devaluation, then the multiplier itself involves largely the relevant elasticities of the multiplicand.[30]

Therefore it is very difficult to divide clearly the final impact of devaluation into parts i.e. elasticity and multiplier or absorption effect. The aggregate effect of any devaluation should be visualised by taking into consideration the changes in income, prices and output in any comprehensive system. Actually before Alexander started his attack on the elasticity approach and put forth his absorption approach, many attempts had already been made to analyse the aggregate effect of

25. Ibid., pp. 263 78 and Alexander (1959) pp 23-42.
26. Machlup (1956), pp. 417-52 and Machlup (1955), pp. 255-78
27. Alexander (1959), pp. 26-34.
28. Brown (1942), pp. 57-75
29. Ellis and Metzler eds. (1970) (Mrs. Robinson), pp. 83-103.
30. Tsiang (1961), p. 390.

devaluation with the help of mathematical models, which allowed income and price changes simultaneously.[31]

Thus it can be asked : if the synthesis had already been made before the start of the controversy, what has been the gain of this controversial discussion? Actually the gain in this debate is not so much the synthesis but the fact that it has brought to the forefront the much neglected role of money supply and credit creation in estimating the effect of devaluation and the stability of the trade balance.

### 2.5. *Savings and Investment Approach*

J. Black[32] tried to reconcile the two approaches with a different blend. According to his terminology, excess of absorption over income produced is equivalent to excess of domestic investment over domestic savings. Whatever may be the means employed to correct such a deficit in the balance of payments, this should either increase domestic savings or decrease domestic investment or both. Under the present circumstances of economic development in many developing countries, Black thinks the decrease in investment is very unlikely. Therefore, he looks for an increase in domestic savings in some way or other.

Savings can be increased by an increase in real income in an underemployed economy. Though by reallocation of resources, income and savings can also be increased in full or near-full emloyment conditions, the result may be dubious, because the real savings can decrease under inflationary tendencies. Thus in full and near-full employment conditions, savings can be greater if there is a shift of resources from low-saving to high-saving classes, but such a positive result will be weak or perverse.

Black thus raised the question of the way devaluation can increase savings.[33] That boils down to how devaluation increases the propensity to save or reduces the propensity to absorb out of a given income. Any answer to this question must meet the basic ambiguities in various terms of total production, income and absorption. Similarly the difference between absorption and production or income, absorption and savings and exports or import surplus should be viewed clearly.

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31. Specially Harberger (1950), pp. 47-60. Metzler and Laursen (1950). pp.281-99, Stuval (1951). Meade (1965), pp. 68-72 and 133-43.
32. Black (1959), pp. 267-74.
33. Ibid., p. 269.

These concepts are tricky, particularly when these are measured in real terms.[34] That is why these parameters should be clearly defined and distinguished in the very beginning e.g. real income and money income in an economy [35] Thus any sum or difference of heterogeneous goods and services requires the expression of these parameters in terms of money. This involves prices. A change in prices will change these concepts. Adjustment of these distorted signals of prices will, from one point of view, reduce the propensity to absorb, or increase the propensity to save, even out of a given real income in a devaluing country.[36]

Similarly from the point of view of individuals, the decrease in the propensity to absorb is considered as a cut in the real income rather than the other way round. Moreover, after devaluation the domestic currency will lose some of its purchasing power, at least over foreign-traded goods. It will affect their cash balances and may result in more savings. There will be a possibility of change in cash balances and thus a change in savings. Suppose cash balances remain the same e.g. if prices of internal goods decrease and thus compensate for the loss of the currency's purchasing power over external goods. Then there will be no overall change in real absorption. On the other hand, the shift in relative prices of internal goods vis-a-vis external goods will induce individuals and other traders to switch their expenditure from external to internal goods.

This tendency will increase the prices of internal goods to a certain extent. This will result in the deterioration of the position of cash balances and thus savings. Actually any expenditure-switching policy[37] will increase the price level, unless it is rectified by a separate expenditure-reducing policy, such as monetary or fiscal policy.[38] It may not be necessary to pursue an active expenditure-reducing policy for a favourable real balance effect. At least the expansion of the money supply, which would neutralize the effects of such a policy should be avoided.

The increase in prices, upon which real balance effect depends, does not mean that the devaluation is inflationary, provided the devaluation is accompanied by steps to cut down the nominal money supply.

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34. *Machlup (1955), pp. 268-70.*
35. *Ibid.*
36. *Yeager (1966). p. 154*
37. *Such as devaluation or import controls.*
38. *Johnson (1956), pp. 165-67.*

First, without a continuous increase in money supply, the rise in prices is a one-sided phenomenon and is not a continuous process. Secondly, whether price rises can be avoided by non-devaluation depends upon the alternatives applied to correct the balance of payments. The use of import controls, instead of devaluation, will also be inflationary. These restrictions are similar to an expenditure-switching policy.[39]

2.6. *Monetary Aspects of Devaluation*

We know already that the deficit in the balance of payments is also described as an excess of payments over receipts. How are these excess payments being made by individuals or authorities and ultimately by the country as a whole? The answer to this question directs our attention to two aspects of the deficit; its monetary nature and its relationship with economic activity. These aspects were neglected by the conventional approach. The residents of the country in deficit meet there excess payments by running down their cash balances. This cannot continue indefinitely. There will be a certain minimum, which the country as a whole would like to hold. Maintaining that minimum would result in cure of the deficit through the mechanism of rising interest rates, tighter credit conditions, reduction in aggregate expenditure and possibly an increase in receipts.

If the deficit is corrected by dishoarding, then it will be considered self-correcting in time. But the authorities may not allow its slow adjustment. They would prefer to quicken the pace, because the international reserves are usually a small fraction of the total money supply, and would be exhausted well before the money balances run down to an extent which would have any significant correcting effect. This indicates the need for more international reserves, which may or may not be available, at least for adjustment.

On the other hand, usually in case of exchange pegging, the monetary authorities can replenish the reduced cash balances by purchasing securities in the open market. This is a sort of re-lending of the currency received by sale of foreign exchange. In this way, the money supply is being maintained by credit creation to clear the excess payments. This can continue for a longer time without the application of other corrective measures. The limit will be again the same i.e., international reserves and the decrease in reserves will force the authorities to take other steps for correcting the deficit.

39. Ibid.

Thus the balance of payments deficit implies either dishoarding by residents or credit creation by monetary authorities. In other words, the equilibrium in the balance of payments requires a change either in the velocity of circulation of money (V) or maintaining money supply (M). The residents' contentment with reduced cash balances in real terms and relative to expenditure and income, implies a rise in the velocity of circulation of money. Furthermore, the deficit associated with the increase in velocity of circulation is supposed to be self-correcting and cannot be relied upon alone. That is why the authorities try to keep the deficit going by credit creation. This in turn implies that the balance of payments and its difficulties are essentially a monetary phenomenon and can be traceable to either of the two causes.

Black points out that the absorption (saving and investment) economists are feeling uneasy about the switch from the absorption approach to the elasticities analysis of determination of imports and exports by supply and demand forces in particular markets without any reference to savings and investment. But we can focus our attention on a particular market, that of foreign exchange. It is quite in order to inquire how effectively the decrease in the foreign value of domestic currency (devaluation) would decrease the demand for foreign exchange from the official sale agency, i.e. the monetary authorities.

It is also natural to find out the size of the result of subsidy of an overvalued currency over the absorption. The higher the elasticity to absorb, the more will be the impact of such a subsidy and vice versa. Moreover, with high income elasticity for imports and exportables, the closer the substitutability of imports for domestic goods, the more people will gain in real terms from cheapening foreign goods. Thus real national income will be considered more from the point of view of the whole community.

Furthermore, we are interested in the foreign exchange market in order to know how well it can operate for free price determination. Such an appraisal can be organised by the elasticity approach. It helps in understanding the empirical facts about the competition between imports and domestic goods within a single country and the competition among exports of different countries in the international market. This also indicates that all resources are not suitable for specialisation in the production of certain goods, and the size of income is also finite.

2.7. *Complementarity of the Two Approaches*

Each of the approaches working independently has seeds of, and even the root cause for the application of the other approach. Normally the absorption approach deals with the propensities to consume, save, invest, etc., while having little scope for the manipulation of elasticities or change created by relative prices. On the other hand, the elasticity approach is concerned with the relative prices and changes brought about by them, and is least interested in total absorption out of total income. The two approaches can be synthesized by recognising the effects of the exchange rate and price changes on the size of real income and real cash balances, and on influencing individuals making decisions about absorption. On the other hand, conditions underlying the elasticities effects, the scope and size of the subsidy afforded by the overvalued currency and also the influence of the size of the difference between private and national views about real income should be kept in mind.[40]

The fact that the balance of payments is a monetary phenomenon (indicated above) implies that a more comprehensive analysis, including, in particular, an analysis of the impact of devaluation on national income and expenditure, is explicitly required rather than implicitly mentioned in the elasticities approach But an absorption approach as an independent tool, devoid of the elasticity approach, is inadequate to measure the initial or primary impact of devaluation. Even the total or secondary effects of devaluation cannot be calculated without the 'dampening-coefficient' i. e., marginal propensities, which in turn depends upon different types of elasticities; if domestic prices are recognised as liable to change with the change in national income.

The importance of monetary factors, evident in the identity as well as in the absorption approach, is diluted by the usual assumption of a constant rate of interest, supported by an infinite elasticity of supply of or demand for money in relation to the rate of interest. Such an assumption is explicitly or implicitly mentioned in almost all modern analyses on Keynesian lines. But this type of assumption would indicate the instability in the exchange rate when a full employment level has just been reached within the country concerned: It will not allow for the destabilising factor of speculative capital movements and a possibility of wage and price rises. Such an assumption about monetary policy may be justified in a depression or in under-developed countries with a high level of un-employment,

40. Yeager (1966), p. 155.

but is not appropriate in the current world of prosperity and high levels of employment.[41]

Thus the synthesis of the two approaches is still incomplete, because of various assumptions even now. A more realistic picture of the impact of devaluation can be visualised by applying both 'blades of the scissors' of the two approaches. The tools of both types of analysis will be helpful, when applied independently or jointly. The total impact of devaluation on the balance of payments should not be viewed in isolation, but in the light of a comprehensive economic system. That implies the knowledge of the simultaneous effects of monetary, fiscal and commercial policies in the external sector and, in addition, of economic policies in the internal sector. For this we have to discard most of the assumptions present in the 'modern' work also. Otherwise there will be various doubts about the results. The disequilibrium will persist for a long period and we shall be inviting more and more restrictions and economic controls over economic life.[42]

### 2.8. *A Final Comment*

Thus the historical development of the theory of devaluation can be viewed as a continuous process of abandoning one more simplified assumption, which inhibited or nullified the validity or utility of the previous results. Therefore, it can be stated confidently that the process of the evolution of the theory of devaluation was a continuous one. It dispensed with the assumption of constant absorption out of given money income in the beginning and the assumption of constant or given money income was dropped later on also. Other autonomous factors were replaced by policy changes and the role of the monetary policy, neglected previously, has been included in the simplified synthesis. That is how the theory stands modified in its new perspective.

The two approaches have been brought together in somewhat cumbersome mathematical formulae but these have enabled us to, not only, discuss one country at a time, but also a pair of countries at least can be considered simultaneously. A complete theoretical analysis of the impact of devaluation requires the construction of a comprehensive general equilibrium model, but such a model, based on full employment at all times and flexible exchange rates, is very difficult to construct.

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41. Tsiang (1961), p. 411.
42. Ibid.

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# The Contradictions of Capitalism and Marginal Solutions

*Nigar Ahmad**

" . . . Indstry must develop together with agriculture . . . Everyone knows that light industry is closely related to agriculture. But it is not yet understood that agriculture provides heavy industry with an important market. This fact will be more readily appreciated as gradual progress in the technical improvement and modernisation of agriculture calls for more machinery, fertilizers, water conservancy and electric power projects, and transport facilities for the farms as fuel and building material for the rural consumers." [1]

In their disenchantment with the current international division of labour, and the realisation of the problems of "development —through—trade", economic planners in the Third World have developed an obsession for strategies focussing on industrialization as the key to economic development. With the Lewis model[2] as the basic formula, there was a mad scramble to develop and nurture a capitalist sector and class, which would be able to generate the necessary "reinvestible surplus" and capital accumulation for the desired take-off into self-sustaining growth. Of course, this required keeping the wages near the institutional (subsistence) level, and a shift in the income distribution in favour of the capitalist class. But it was all in a "good cause", making use of devastating logic—that the size of the cake must increase before it can be distributed. (Mary Antoinette would have provided an answer as to what was to be done in the meantime for those who already lived below or near the bread line). However, inspite of the top billing that countries like Pakistan and Brazil once received from some big names in the world of economics, by and large, there is a growing disillusionment with the industrialisation experiences of the developing countries[3]. The

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1. Mao Tse Tung (28)
2. Arthur Lewis (26)
3. Hirschman (22), Bruton (10), Soligo and Stern (36), Enos and Griffin (14), Morley & Smith (30), K.N.Raj (32), K. Griffin (19).

expected amount of the rate of savings and reinvestment was not forthcoming, the industrialisation caused a greater dependence on imports inspite of the efforts at import substitution, and the rate of absorption of labour force was not keeping pace with the rate of capital acoumulation.[4] So the focus is being shifted back to agriculture as the major hope left for poor countries to provide the necessary economic regeneration, and labour absorption.[5] And it is becoming once again fashionable to talkd in terms of "comparative advantage".

It would be misleading to think that dissatisfaction with the progress of industrialisation is the only reason for agriculture to come back into the forefront. Otherwise it would just have meant a re-evaluation and restructuring of the strategies which misfired in various ways. The more significant reason is the linking up of hunger with world revolution in the minds of the ruling elite in the United States and elsewhere, and the consequent concentration of research and funds into revolutionising traditional methods and inputs of agricultural production.[6] (This was considered the major bottleneck in the modernisation and commercialisation of the traditional sector.) Thus there emerged a very deliberate shift in U.S. policy, to stave off this world revolution, to say nothing of the incidental profits to be made by creation of markets for agri-business! In this connection it is worthwhile quoting Hubert Hnmphery's remarks when referring to the P L-480 food programe, for it is quite indicative of the workings of the mind of the U.S. ruling class: ". . . And if you are looking for a way to get people to lean on you . . . in terms of their cooperation with you, it seems to me that food dependence would be terrific." In 1966, Lyndon Johnson announced that the deliveries of P.L.-480 would be under new stringent conditions and would depend on the willingness of Governments to shift emphasis from industry to agricultural development.[7]

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4. Mabro (27), C.R, Frank (15), Myrdal (31).

They mention choice of capital—intensive technology and high urban wage rates as some of the causes for the low rate of labour absorption.

5. Myrdal (31).

6. Cleaver (12). He suggests that the setting up of the research programme by the Rockefeller Foundationin 1933 in Mexeco, was to soften rising nationa ism and to keep up with the war—time friends.

The concern with the Far East was also due to the Chinese Revolution, the Korean war Communis in su.gency in Malaysia, and Bukoa.ahap victories in Philippines. The French were rapidly militarily with-drawi g in Indo-China. Military force was used to protect and police the "free world" but it was realised by the U.S. elite that "Hunger was a major Communist ally" in Asia.

7. Both examples quoted in Cleaver (12).

Cleaver provides sufficient evidence to prove that this "seed-fertilizer revolution" is a creation of the economic institutions of western Capitalism—Ford Foundation, Rockefeller Foundation, U.S AID, I.B.R.D. This in itself is a suspicious factor for those in the underdeveloped world who have already been the victims of the social and economic engineering of these institutions and their backers.

The cynicism expressed above must not be misunderstood to undermine the genuine technological and biological break-throughs that have been made in agriculture. No one can deny the miaculous increases in grain output which are the result of the research done in Mexico, Philippines and elsewhere, or to minimise the potential this has for modernising the forces of production, creating greater employment opportunities within agriculture (and through the multiplier effect, outside the sector as well), and most important, feeding the starving millions. But as Cleaver very correctly puts it; "The problem of hunger in the capitalist world has rarely been one of absolute food deficits . . . It is one of uneven distribution caused by a system that feeds those with money, and unless forced to do otherwise, lets the rest fend for themselves." Therefore I believe that a more meaningful and perceptive approach to the implications of this bio-chemical break-through in agriculture for social change development, must be developed in the context of the social relations of productions in the countryside, as well as the superstructure (i.e. the institutional framework) relevant to the prevailing mode of productions. Otherwise the debate remains a technocratic exercise, and deals with questions like whether the "new package" is labour intensive, whether mechanisation should be introduced, what economies of scale are attached to the new technology etc,

It is obvious that the new agricultural strategy is designed to promote a shift from the traditional semi-feudal mode of production in agriculture in the underdeveloped countries, to the capitalist mode of production. The effort is to try and integrate the rural economy into the capitalist market economy where the peasant must sell his output to get the necessary cash to purchase the inputs. Thus the development is expected to change his attitudes[8] and encourage him

8. Leon Hesser (21) ".....the myth that the illiterate farmers don't want to change from traditional methods has been broken forever..... Directors of research stations in Pakistan say that farmers are now knocking on their doors trying to get the latest in new varieties and new technology. This is the real revolution."

to abandon collective consumpation habits,[9] and production becomes relatively largely for exchange value rather than use value.

However, just the penetration of commercial relations into the rural economy does not ensure the shift towards capitalist farming. The development of the forces and social relations of production, the birth of a new social formation in the dying throes of the old. is accompanied by certain fundamental changes, which are beginning to manifest themselves in the social and economic orders in the developing countries. A dialectical approach to the study of this transformation has been taken in an excellent survey on the experience of the green revolution in India.[10] References to this survey will be made in the analysis below.

Whenever, the "High Yielding Varieties" programme has been carried out, rich farmers and landlords, even with paternalistic ties and other feudal bonds with those who live off their land, or are politically subservient to them, have responded to the high profit possibilities ensured by heavily subsidised inputs and high support prices, given the manifold increase in output, of course. The "elite farmer strategy" is meant to have a heavy bias for the richer classes in the countryside, and by its very nature of "building on the best," has created a concentration of income and wealth—and power. These rich farmers are the ones who have the surplus to purchase the inputs, especially the "leading input"——water. They are also able to afford the various forms of mechanisation, have access to cheap credit, maketing and research facilities, and other services that are part of the "package." All this has meant a manifold increase in the value of land and one finds many distinct consequences of this.

(i) Landowners who had hitherto leased out their lands and were quite satisfied with the various arrangements of distribution between them and the peasants, were now making attempts to eject these tenants. I doubt if any firm studies have been carried out on the subject of evictions. I certainly know of none in Pakistan. However there are some rough indicators. Shaw quotes Newsweek of August 3rd 1970, "(In 1969) Land-

9. The number of sharers in the total output of the land would have to be reduced if the size of the total agricultural surplus must be increased for reinvestment purposes. I suspect this will make the ' disguised unemployment" become open unemployment.

10. Byres (11) Surveys most of the literature on India's green revolution, much of it from the Economic and Political Weekly.

lords brought more than 40,000 eviction suits against share croppers in the State of Bihar alone, and in Mysore, more than 80,000 of such cases were now pending before courts."[11] There is evidence of similar evictions in Sarhad.[12] However there may be other factors like the politicisation of the peasants, which may also have a bearing on the evictions. Carl Gotsch[13] suggests that it might be the disturbing of the historical "batai" that may put pressure on the landlord to evict his sharecropper. The absolute increase in the income from the HYV output may well tempt the landlord to take over the share of his tenant, and hire wage labour instead.

(ii) When there is difficulty in ejecting, sharecropping changes from the semi-feudal exploitation to the capitalist form, the landowners taking a greater interest in the cropping pattern, providing a large part of the investment (esp. the tubewell, and some form of mechanisation) and pushing the tenant on to the marginal lands, and subsistance farming. With the new policies of the government in Pakistan, where the landlord is to bear the cost of the inputs, pay the water rate and the taxes, this may well turn out to be the result. Already there is some information that tenants who wish to stand up to the landlord and demand that he pay his share of the costs as was announced in the land reform policy, are being thrown out. It is much easier in the feudal domain where the landlord is immediately more powerful than some distant Land Reform Commission, to stick to the age-old arrangements of distribution.

(iii) The third consequence of this increase in the value of land is that the capitalist farmer is going in for more land, whether through purchase, or leasing in—which may mean displacing more tanants. Shaw quotes interesting figures for India in this respect: "In the Indian Punjab the amount of land owned by farmers with more than 20 acres increased by 10% between 1955-56—1967-68. The acreage covered by farms in the size group of 20-25 acres grew by only 4%, whereas those in the size group 100—150 acres increased by

11. Shaw (35).
12. Feroze Ahmad (1),
13. Gotsch (17).

40%"[14]. It would be interesting to see if the new Agricultural Census of 1972 confirms this for Pakistan. Besides the capitalist farmers, in Philippines, Mexico and Pakistan, there is emerging a small group of commercial farmers, who were previously not interested in agriculture, but are now buying up farms and making profits from the cultivation of then new varieties.

Thus one sees two main trends developing from the above facts :

(a) The emergence of a class of rich peasants whose interests are in direct conflict with those of tenants and small farmers.

(b) There is a tendency for the size of the operational holding to increase, despite the pressure on land.

There are other features which characterise this shift to capitalist farming.

(c) There are high rates of surplus and capital formation in agriculture.

Shaw quotes AID studies showing 157—258% increases inreturns over costs peracre in Philippines and India, respectively.

An indicator of this capital formation can be the concentration of tractors and tubewells in the areas where operational holdings are large. (In view of the fact that tractors and tubwells are considered "lumpy" investments, one would expect this anyway). Gotsch finds that the average holding size on which tractors are employed is 100 acres, and that 80% of the tractors were found on farms over 50 acres, which meant a little over 2% of the operator population was controlling 23% of the land in the Indus Basin.[15] In another article he mentions that 70% of the tubewells in West Pakistan were installed by farmers having over 25 acres, according to a survey conducted in 1968.[16] In Punjab-Haryana, there were 25,000 tractors in 1970 as against 8,000 tractors in 1960, and the distribution was skewed towards large farmes i.e. those operating over 30 acres. Also by 1970, 24% of the irrigated area was serviced by tubewells and pumpsets, 50% of the wheat crop was mechanically threshed, and there were 10,000 threshers compared with 5,000 in 1964.[17]

14. (34) quoted in Shaw.
15. Gotsch (17).
16. ——(18).
17. Byres (11).

Of course, the cause and effect nature of this relationship is obvious, for where the farmer has an initial surplus to buy a tractor and bore a tubewell, he would also tend to get a higher rate of return on investment, and generate an even higher surplus and capital accumulation [18] It is the reinvestment of this capialist surplus (the key to the growth process in the Lewis Model) that shows that the potential for growth in agriculture lies in the dynamics of this development of the forces of production, even though the capitalist mode is not the dominant form as yet.

(d) The change in the organic composition of capital, with the relative increase in constant capital__i e. the tendency towards mechanisation. The figures and examples quoted above of the large farmer-bias of tractor mechanisation are quite eloquent.

The arguments and pressures for mechanisation have their own rationale :

1. Mechanisation ensures the timeliness of farm operations and makes multiple cropping possible for it requires speedy operations.

2. It reduces dependence on draft animals, which have a low productivity, have high costs of upkeep, consume food sources of energy, and utilise land with high opportunity cost.

3. Hence mechanisation is land-saving at the time that pressures on land are increasing, for if work animals are disposed off, land is freed from fodder and also its intensive use is possible.

4. It increases productivity of labour at the same time as it creates demand for additional labour by allowing multiple cropping, requiring careful tilling of land, sowing, weeding, using fertiliser and pesticides. It is generally agreed that the new bio-chemical package, with some selective mechanisation, creates demand for more labour per acre, but less per unit of output. So that with increase in output, demand for labour will increase but not by the same proportion.

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18. Gotsch (17). Returns to tractors with tubewells and new seeds etc. are 40 %to the capitalist farmer.

5. Mechanisation makes possible dry-land farming, and thus helps to counteract the regional bias of the "package" in favour of irrigated areas.[19]

The arguments against the use of mechanisation in countries like India and Pakistan are equally powerful.

1. Besides the fact that mechanisation[20] may permit multiple croppings in regions favourble to intensive cultivation, the effect on yields otherwise is inconclusive.

2. The shadow prices of the factors of production may dictate a labour-intensive technology in these countries. But the distor tion of factor process by subsidies., over-valued exchage rates and soft loans are the final determinants of the choice of technique, and this may be in direct contradiction to the factor endowments within an economy.

3. The scarce capital and foreign exchange resources should not be diverted to agriculture, in view of the industrialization programmes, that are so heavily dependent on capital imports.

4. Net effect of mechanisation is labour displacing, without there being a simultoneous creation of job opportunities elsewhere in the economy.

5. It accentuates disparities as it has a big-farmer bias.

The private benefits and costs notwithstanding, it is the emphasis on social costs and benefits that should be the concern of a government going in for planned economic development for all. There have been many studies on this very theme.[21] Of these, the most well known on Pakistan by Bose and Clark, firmly concludes that the social cost of mechanisation far outweigh the social benefits.

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19. Lawrence (25) quotes Rana Tractors and Equipment Limited, who undertook an experiment with dry wheat farming in Campbellpur District with the help of tractor ; another experiment was conducted by the Punjab Ag icultural Research Institute Average yield in both experiments varied from between 27 to 29 mds. Within each group the range was great from 50 mds. to 18 mds. per acre. The average yield in the neighbouring plots which were cultivated with the traditional methods, the yield was 4.9 mds & 6 mds. respectively in the two experiments. Roger's tentative conclusion is that "medium-and low-yield farmers, rather than high-yield farmer would tend to benefit most from the use of modern machinery"

20. The definition of mechanisation is crucial to any debate. Here I am largely referring to various combinations of sophisticated techonolgy like power-driven tractors, wheat drills, tank sprayers, stationary threshers powered by an electric motor, and combines.

21. Bose and Clark *(9)*, R. Lawrence *(25)*, Kaneda *(24)*.

But, needless to say, the rich farmer is not going to go into the social cost benefit analysis ; the attraction of owning a tractor is very great. As mentioned above the scarcity of capital is not reflected in prices, and Gotsch gives an illuminating example. In 1971, the free market prices for tractors was between Rs. 25,000-30 000 in Pakistan, but the linsced recipients paid about Rs, 16,000-18'000.[22] And there is always the prestige involved in owning a tractor !

Before leaving the subject of the change in the organic composition of capital, I would like to make one digression regarding this capital accumulation and shift to mechanisation. The rich capitalist (farmer/industrialist) in the developing countries fundamentally different from his bourgeois counterpart in the earlier phase of industrial capitalism, in Europe. Then the nascent bourgeoisie used merchant capital made from mercantile expeditions to the foreign land, or the plunder and looting from the new world, as the investible surplus in industry. With the development of transport and communications and the undereamed-of accessibility and expansion of markets abroad, erstwhile merchant turned into an industrialist as he sought to control the production and supply of his merchandise at home. The Industrial Revolution of the mid-eighteenth century in England also made production possible on a mass scale. Then there was the surplus made by the middleman between the craftsman and the trader. which surplus was also invested in industry. The State, however, was controlled by the feudal aristocracy, so that the emerging bourgeoisis had to struggle over an extended period for economic and political domination. (Although already in the late sixteenth century, social attitudes and feudal obligations in the English countryside had started undergoing a change. The "enclosures movement" was the most striking sign of this changed outlook).[23] So it was much later, after the Industrial Revolution, the Reform Act of 1832 giving the vote to the industrial capitasist, and the antiCorn Laws Bill of 1848, that the feudal forces surrendered, and the lines between the rural and industrial capitalist became blurred.[24]

On the other hand, in countries with a past record of imperialist control, the landlord has turned a capitalist not through his "entrepreneurial spirit" or through a long fought-out struggle between the

22. Gotsch *(17)*.
23. Moore *(29)*.
24. Ibid.

feudal and the capitalist forces. This is because the State in the newly independent countries is a coalition of various classes—the landlords, the comprador bourgeoisie, monopoly capitalists, smaller capitalist, and elements of the of the petty bourgeoisie, along with two distinct power groups the army and the bureaucracy. Of the entire coalition, the army and the bureaucracy are the most developed and organised institutions, having been nurtured and groomed under colonisal rule, to serve the interests of imperialist masters. This is the overdeveloped superstructure i.e. overdeveloped relative to the economic base, with underdeveloped or retarded productive forces. The rest of the classes in the State coalition act as countervailing forces for each other, for neither is developped enough to dominate the rest or to isolate its interests from those of the others. Thus there is a form of a pluralist oligarchy, in which the army and the bureaucracy mediate between, and reconcile the contradictions of the different classes, thereby acquiring an autonomous status.[25] Thus the main institutions of the "State apparatus" which are supposed to protect the interest of the ruling class, become a part of the ruling elite in these countries. And it is in the interest of this class colition to foster capitalism through the machinery of the State. The landlords may be the least happy about the inroads into their domains that State Capitalism must make, (unless they "straddle" as in Latin America, Pakistan and India-that is have their fingers in both pies, agriculture and industry), but as long as they are able to ward off land reform (or its implementation, which is the main thing), and resist agricultural taxes, they are willing to play ball. Thus the capitalist in these countries is carefully and systematically nurtured, and hence this qualification about the point of capital accumulation and the change in the organic composition of Capital.

It is this qualification which places a limit on the revolutionising of the forces and social relations of production as took place in the advanced cap talist countries, and thus narrows the options of the developing countries as to the development strategies they must adopt [26]

(e) The final characteristic of capitalist farming is the new relationship with agricultural labour. The customary obliga-

25. Alavi (4).

26. Patnaik (39).

tions, the whole pattern of feudal social relations is disintegrating, and being replaced by hiring and cash payments. However this process has not been intiated but hastened by the new pattern of rural development.

Besides this change in social attitudes and traditional responsibilities, there has been a steady displacement of labour in areas where mechanisation has come in full force, inspite of the conclusions of the IACA study[27] and the Roger Lawrence study.[28] Bose and Clark[29] in interviewing farmers in West Pakistan found the recurrent theme, that the labour force per acre had been displaced by 50% inspite of the claim made for mechanisation mentioned above. Another study quoted in Bose and Clark, based on 60 mechanised farms in Punjab and Bahawalpur found that on farms which had previously employed 2000 agricultural labours, there were now only 340 left, and of these, 100 were employed on tractors.

Similary Billings and Singh[30] show that for a ten acre farm on well-irrigated land, with the introduction of high-yielding varieties, man-days per acre rose from 33.4 to 42.5, but fell to 18.1 with the use of a tractor, and the introduction of a reaper further reduced the labour input per acre to 12.1 man days.

Thus although the new varieties are sure to create a greater demand for labour with all the careful tilling of the land that is required. as well as the multiple cropping permitted by their sensitivity to the length of the daylight hours (hence they can be planted at any time of the year in the tropics and the sub-tropics, with adequate water, of course), the introduction of mechanisation, except under certain conditions, is likely to add to the "reserve army" of the underemployed in agriculture. Thus the evicted tenants, along with the additions to the rural proletariat of those made redundant by machinery, would add to the pressures on land on the margin of capitalist farming or will be openly unemployed, there by aggravating the existing rural tensions. And as Robert Mcnamara asks, "Can one imagine any human order surviving with so gross a misery piling up at its base?"[31]

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27. Quoted in Gotsch (17)
28. Lawrence (25) "The interesting result of this is that labour utilisation in most of the mechanised and semi-mechanised techniques is eigher than that associated with traditional techniques". Below he says, 'Concern about the labour-displacing effects of farm mechanisation may be exaggerated".
29. Bose and Clark (9).
30. Billings and Singh (6), quoted in Shaw.
31. Quoted in Shaw (6).

The laws of motion of Capitalism generate an uneven development at the international level, which seeps down to the national economy, and produces lopsided development even within the country. This is because the guiding force is the profit motive. In this pursuit of efficiency and profit there is a natural tendency to build on what is already developed,[32] This has led to impressive aggregate growth rates in some areas, "but almost everywhere in the international capitalist world it has favoured only a relative few at the expense of the many".[33]

Herein lies the main contradiction of capitalism—the increasingly social nature of production, but the appropriation of the surplus by a few, the obsession with increasing the size of the surplus is in contradiction with the realisation of the value of the production, (In Keynesian Jargon, the control over wage costs by the capitalist, the attempts to reduce the share of Labour in national income, imposes a limit on the effective demand crucial to prevent over-production. Hence the demand for state intervention, by multinational corporations in their operations at home and abroad, the highly prestigious space programmes, the wars-hot and cold to keep up demand and employment at home.

Thus capitalism simultaneously generates wealth and poverty, and it is in the consequent polarisation of the economic and social forces that it sows the seeds of its own destruction. The contradictions generated by capitalist agriculture, which affect the social relation and forces of production, are no different.

### The Regional Contradiction.

Since the phenomenal success of the "package" depends heavily on a regular and regulated supply of water, the regions well-endowed with developed irrigation or further poential for irrigation exension, have a natural advantage over others. Raj's study of empirical evidence of the high growth rates in agriculture in Mexico, Taiwan and Punjab, Gujrat, Madras (because these regions of India had comparable growth rates) shows that the feature common to these areas was not only that they had considerable irrigation facilities as a result of past investments, but that there was an extension in the

32. Even where foreign capital went out in search of raw materials and markets in the colonies, the pattern was to develop "capitalist enclaves", resrricting the diffusion of technology, values, and institutions to these enclaves, leaving the rest in the twilight of the traditional and the modern worlds.

33. Gurley (20).

irrigated area during this period of high growth.[34] Figures for the Pakistani Punjab show the ecological suitability of that region for the successful operation of the new technology.[35] . Whereas different picture of the effect of the seed-fertiliser revolution emerges when one examines technological change in Sind and Sarhad, which are largely rainfed.[36] In Mexico where the phenomenal increases in wheat production were first experienced, so that from an importer of wheat, the country has now become an exporter, the new seeds have been planted in the North West, while the rest of the area has remaind virtually untouched.[37]

Thus the green revolution is benefitting regions already more developed and there is a time lag before the regional bias can be overcome, because new varieties must be developed. Also a very important factor is that the rising productivity is already threatening to flood the market (the problem is being succesfully solved in the meantime by hoarders, black marketeers and smugglers) and further expansion of area under food grains may make the support price even more unrealistic.

## The Class Contradictions.

As has been obvious from the above analysis, the seed-fertiliser revolution has, by and large, benefitted the rich farmer. Byres quotes an American commentator as saying, that the "Green Revolution belongs to the Kulaks".

Studies relating to the diffusion of the new seeds, and extolling their infinite indivisibility and their neutrality to scale, forget that what one, has to deal with is the whole "package"—the fertilser, weedicides, pesticides, water, credit, extension services etc. The wealthy farmer may not use more of the seeds, but he certainly is in a better position to use more of the complementary inputs. Gotsch believes that foreign aid, besides making available the foreign exchange assistance for tractor inputs, has also favoured the big farmer, through a keenness to emphasise more advanced systems of farming. The AID agricultural experts were keen to reproduce the result achieved in the South Western United States in the comparable ecological

34. Raj (33).

35. Gotsch (17).

36. Gotsch (16) Since "the rainfall is virtually the sole determainant of the cropping pattern, the advent of the new varieties of wheat is unlikely to protuce any significant alterations in land-use pattern.

37. Cleaver (12).

conditions of the Indus Basin. Thus they spent their time and efforts with the advanced farmers "to reproduce the conditions of an advanced society "rather than develop techniques that would have suited the majority".[38]

This phenomenon of "to him who hath shall be given" is not simply a deliberate hot-house cultivation of a class of rich peasants. There are more complex factors involved which permit the rich to get richer and the poor to get poorer. Thus a more political economy approach is required to understand the nature of the policies formulated and implemented, which "appear to fly in the face of the interests of the society as a whole"[39]

In the following paragraphs I will draw largely from Gotsch's perceptive analysis of the workings of the rural sioso-economic system.[40] To judge the workings of the impact of the dynamics of technical change on the social relations of production in rural areas Gotsch mentions four basic considerations.

1. The characteristics of the technology itself :

This includes the question of effiency, i.e. the minimum amount of resources required for the farmer to get sufficient returns which will make him change his attitudes towards the adoption of innovations. Given the distribution of income and assets in the countryside, this sets very narrow limits within which the rural population, would benefit.

The second aspect is the factor intensity effect. The bias of the technology will have a crucial impact on the relative income share of factors, given constant factor prices, e.g. herbicides and weedicides are among the most labour-saving, while tubewells and other mechanical devices to provide supplementry water, are labour-using. Even tractors can be labour-using when they permit multiple-cropping.

2. The magnitude and relative distribution of productive assets further determines the dynamics within which any technological change in the rural setting will have a bearing. The absolute magnitude obviously determines the size of the surplus and the consequent ability of the various groups to participate in the new technological changes. While the relative distribution decides, and is a close approx-

38. Gotsch (17).
39. ——— (18).
40. Ibid.

imation to the social stratification in the country-side, and the distribution of power.

The absolute size may be irrelevant where divisible inputs are concerned but where lumpy investments are involved, and the economies of scale are substantial, the smaller farmer is immediately at a disadvantge. Shaw notes that for private tubewells, the minimum command area is 25-50 acres, below which the cost of water rises sharply.[41] Again the private returns to tractor mechanisatson are higher than private costs when areas over 150 acres are involved.[42]

Thus agricultural growth affects each group differently depending on the characteristics of the technology and the distrbution of assets it the country side. "The effect howover, transcends the mere fact that one group is made better off relative to another in terms of material benefits—the income distribution question. It alters the distribution of power as well."[43]

3. The types of institution and organisation that exists at the local level and the distribution of their services. The incentives which operate in any public organisation are such as to favour the larger farmers. For example, the institution may be more keen to show the amount of money loaned as the indicator of its successful operation, rather than the number of loans; or the cases of default may discourage administrators, and make them demand collatoral that might be beyond the reach of the small farmer, to say nothing of the tenant. Also, quite often the technical and research worker is a lowpaid person with few facilities at his disposal, and the large farmer is able to provide the necessary 'perks' and so is able to "purchase" the exclusive attention of the expert. Even the efforts to develop cooperatives have dwindled down to providing the necessary services to the bigger farmer. (More below)

4. Social systems and traditions further decide the relationship between technical change and distribution of income. It is essential to know the nature of the social stratification, the interaction between tribal, caste and kinship groups before the "successful" functioning of institutions and organisations can be postulated.

41. Shaw (35).
42. Gotsch (17).
43. Gotsch (19).

## The Ecological Contradictions.

According to Cleaver,[44] these are the most potentially devastating. Since the green revolution is an extension of capitalist agriculture to the tropics, the contradictions it brings with it are more than just technical problems, for the technology itself is a product of the Capitalist system. For example the pesticides are primarily produced in private business laboratories and capitalist competition dictates that research costs must be minimised, and the largest possible sales made. The resultant products are thus not tested enough, and are so designed as to kill a"broad spectrum of pests" The results of this lack of "kill-specificity" is catastrophic. Fish ponds are poisoned & there is massive protein destruction.

As far as the new plant varieties are concerned, the efforts of commercial breeders are to reduce labour costs, which may make them disease-prone, especially susceptible to leaf-blight. Byres also quotes references which mention that the new strains are disease-prone [45] Raj reaches the same conclusion.[46]

Thus there is this basic problem of tying food production to a system of profit-maximisation, but where the manufacturer of the input does not have to bear the costs of the error!

The upshot of the above discussion is to show that the introduction of capitalist farming, given the encouragement by State Capitalism, but also given the social realities of the rural 'system", is likely to add to the economic and social polarisation that does not auger well for those who plan for these very strategies toward off social upheavals. As Dandekar and Rath point out... "while one is seeking to abolish inequality and injustice in the old feudal structure by abolishing intermediaries and reforming and abolishing tenancy and is creating conditions for owner cultivation, inequalities are reappearing in a more aggressive form strengthened by potent Capitalist forces"[47] The growth of the new class of the Capitalist farmer will weaken the feudal hold of the landlord and pose a threat to his life style, that may force the latter to change his outlook and attitudes. The increased competition combined with the modernised techniques, is

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44 Cleaver (12).

45. Byres (11), refers to Desai, Frankel and Wharten, Jr.

46. Raj (33). "As plants thicken with high fertility conditions insect populations, and opportunity for spread of disease will increase".

47. Danderkar & Rath (13).

likely to have a great potential for productivity and output in the agricultural sector. But it is to be fearded that this will benefit only a few and at the expense of the majority. The increase in rurul unemployed will throw those displaced, on other rural areas (already outside the domain of the green revolution) and would intensify subsistence farming there, increasing poverty and regional disparities. This will also have the "push" effect to the cities, swelling the urban slums and adding to the lumpen-proletariat there. There is no doubt that with this sharpening of class contradictions, combined with the "subversive" influence of ideolgies in a world shrunk by the communication media, and the role of Imperialism which will not permit the same bourgeis development to take place in the "satellite" as did in the "metropolis", the "red revolution" seems very much on the horizon. Of course, the State has the alternative to socialise all land, equitably distribute it to the rural population, encourage simple cooperatives, than collectives and finally communes, somewhat on the Chinese pattern.[48] But in view of the class composition of the State in the poor countries, and the lack of any organisation to implement honestly and effectively any radical transformation that is urgently required, as well as the lack of any ideology to motivate and mobilise the people, this alternative is ruled out.

However, it would be ridiculous to reject the seed fertiliser revolution for these reasons and to prevent the modernisation of the productive forces, unless we wish to opt out of the tewentieth century altogether and strengthen the forces of reaction. At the same time, marginal modifications like selective mechanisation, cooperatives and ceilings on land, will be illusory for as long as conditions exist that reinforce the social and economic polarisation, the contradictions of Capitalist development cannot be resolved, And yet I feel that State intervention, which will be more than just populist rhetoric will have to take place, and I suggest certain reasons for this.

1. I believe that the contradiction between the popular commitment of the "democratic regimes" and the class alignments of the ruling elite, may force the State to push through some democratic reforms, (one cannot rule out the shift to fascism as well).

2. Although I have no figures to quote here, but intuitively one can see that land reforms in countries like India and Pakistan, cannot satisfy the hopes and aspirations of the majority of the landless,

48. Walker (38).

for even if the reform is radical, as it is relatively so in India, the evasions and tactics of the landholders make any redistribution illusory. In fact, the threat of impending land reform is known to increase tenant eviction. Feroze Ahmad[49] gives a tenative figure, that the recent land reforms in Pakistan will not benefit more than 1.5% of the estimated number of those in need of land. Given the pressure on land, the goverment can therefore expect increasing unrest in the countryside as the revolution of "rising expectations" is thwarted.[50] I think that for pacification purpose some "radical" reforms will be taken to attempt to lessen rural tensions (just like in Latin America when the peasantry gets restive and violence erupts in the countryside, cooperatives are usually started as a sop to the revolting peasants). In India, land ceiling was lowered to about 18 acres recently, and in Pakistan one hears much about Peoples 'Works Programmes Social, Cooperatives and Agrovilles.

3. There is a possibility that the new emerging class of the capitalist farmer might be able to constitute a strong enough lobby (along with the army, bureaucracy and petty bourgeoisie, who oppose feudalism) to try and undermine the hold of the feudal forces in the countryside, for it is these obsolete relations which are acting as fetters on the new forces of production. However, I do not expect, for the reason I gave above about the class composition of the State, that this struggle for power will be very bitter, for in the final analysis the forces of capitalism and feudalism will unite against their common enemy—the power of people. Consequently, unlike the bourgeoisie in Europe, this rural bourgeoisie will not align itself with the rural proletariat, to undermine the feudal stranglehold, The tussle will be at the highest level, but there will be all attempts to contain it there and not let it trickle down. The most one can expect is that given the strength of the rural capitalist lobby, there might be pressure on the government to further discourage absentee landlordism, encourage self-cultivation, and in this context permit some reduction in the land ceiling. If this presents the Capitalist farmer in an "awami" light, so much the better.

4. And finally, the most important external factor may be the aid donors who might press for some "radical reforms" as a form of

49. Feroze Ahmad (2).

50. Shaw (3') quotes Washingten Star of Dec. 14, 1969, that at the end of 1969, over 170,000 acres of land was forcibly seized by peasants, and 380 people assassinated in 10 months.

adjustment mechanism in the system. There may be many reasons for this :

(a) a genuine concern with the demonstration effect of successful peasant-worker revolutions in the world, and its lure to the "wretched of the earth".

(b) To the extent that a greater proportion of the agricultural population participates in the techological changes, it creates a demand for the agricultural inputs from agri-business concerns in the developed countries whose lobby may be stronger than the farmers who are producing the large grain surpluses in these countries.

(c) The demand for further research and technical assistance from the developed countries is a great boost to monoply capitalism, and creates the much required links between the metropolis and the satellite for social and political manipulation.

For this focus on research I quote Leon Hesser,[52] "The AID technical programme is being reshaped . . . the major emphasis is on research" In the same magazine Alvin Bishop, who is here to develop a report on how to improve the crop yield of barani farmlands in Pakistan (Sponsored by U.S.AID) admits, "It will need a tremendous transfer of technology that is now available in the developed countries."[53]

On the assumptions spelled out above, I feel the government may find themselves taking measure involving some social justice and a redistribution of income. In this connection I would like to suggest measures that can have a marginal effect in eliminating some of the poverty and alleviating the more wretched conditions.

In the first place, a correct comprehension of the relationship between agrioulture, light industry and heavy industry must be developed by the ecomic planners when devising strategies of development. (The reference on Mao, and Raj on the 'Machine—Tools, in this paper). Since this merits more than a mere paragraph, it is beyond the scope of this paper.

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51. Alavi (3) "..... the most profitable part of the operation (of the neo—colonialist ponetation of foreign monopolies) is in establishing a market for goods manufactured in the metropolitan country, and setting in motion a stream of payments by way of royalties and fees for 'technical services", use of patents and brand names etc. Indeed, these other benefits are so large that even a quarter of the total profits earned in the corporate sector in the Indian economy is regarded as relatively unimportant by comparsion".

52. Leon Hesser (21).

53. Alvin Bishop (7).

The next measure could be some form of a cooperative effort encouraged in farming, credit facilities and marketing. Again I have no illusions about the experience of cooperatives in underdeveloped countries, and I would like to develop the theme a little, at the risk of making a long digression.

The cooperative movements in the developing countries have, byr and large, been a "top-down" effort with the imposition of a "charte myth". But there has been little effort to go to the people directly. to understand the "value of the autochthonous" to imbibe the peasant culture, and with these ingredients to work out a system of mutual-aid and self-help which embodies all that is indigenous, i.e."of the people, by the people, and for the people."

The xenophobic tang of this statement should not be misunderstood, but what I wish to emphasise is that like in many other fields, we impose alien ideas and institutions which have been developed under conditions quite differnt from ours, which evolved in response to certain specific social conditions. To impose a cooperative-farm working in present day England or Germany, or even to copy earlier forms of these cooperatives, is to postulate an indentical historical process evolving in the rubrics of our social stucture.

The other point is that cooperative legislation in these advanced countries was enacted after people had already developed various forms of mutual help and joint effort. and then had struggled to get these legalised. In our countries, regardless of the interaction of the socio-political factors the highly factionly nature of village politics,[54] the rigidities of social heirarchies, the feudal mentality-a charter is proclaimed embodying such noble ideals as unity, self-help mutual aid, selflessness, uplifting the downtrodden, and a great many cliches about transformation of man's relation with man, and his control over his natural surroudings.

It is for the very reason that cooperatives operate under the traditional institutional framework, and in any case, are not expected to achieve a structural transformation of the mode of production, that they tend to fail miserably in fulfilling their "revolutionary" role. This "planned change" is likely to have some marginal effects, but it is not significant enough to pose a threat to the established rural systems-the real barriers to progress. "However marginal change may

54. Alavi (5).

carry a potential for further radical transformations, and hence the need to control it by the threatened systems."[55] This control is effected through limited reforms, instead of a thorough social overhaul.

Most studies of co-opertives,[56] especially those carried out under the programme of the UN Research Institute for Social Development, all reach the same conclusion that, by and large, cooperatives have strengthened the existiug domination-esploitation pattern of society; the social rigidities have been reinforced, with the rural upper classes making "capital" (in some cases, literally) out of an organisation that was meant for the uplift of all, and was to ensure a more equitable way of life. Thus there has been little development of productive forces, marginal or no democratisation in rural politics, and no manifestion of self-determination and independence of previously subordinated classes.

However, regardless of the limited nature of the modifications a cooperative can manage, there is evidenee of some which manage to achieve some of the aims and object set by their planners. Inayatullah[57] in his review of the fourteen cooperatives in Asia noted that the characteristics of the successful cooperatives were :-high solidarity and effective democrative authority, homogenity in caste and class structure, awareness to use cooperatives to develop the productive forces, discipline to follow the rules, and a broader vision of the usefulness of coperatives in solving rural problems. These cooperatives were located in communities with a flexible social structure, week caste and class barriers, democratic participation, voluntary community action ("developmental solidarity") exposure to external influences (conditioning their ability to imbibe new ideas), developed materialist conscioness, and greater "inter-personal" trust.

One of the ways of creating the per-conditions for successful cooperatives is to narrow down initial inequality, and this can be done by implementing effectively the current land reforms, and further cutting down the ceiling on land.

Given the super-normal profits from the introduction of the new technology, this would not mean serious impact on the income of the capitalist farmer. The reclaimed land should be distributed : it will not come to much land family, but this would be all the better, as than they will feel the need for a joint effort. Ownership rights must

55. Fals Borda (8).
56. Myrdal (31), Thorner (37), Inayatullah (23), Fals Borda (8).

be given, but on the condition of joining the cooperative. Here, mere emphasis should be laid on "education" rather than on securing quick results. The simplest form of cooperation—the mutual aid theme could be started, where the peasants would share their implements and draught powers (both of which would be in short supply) and learn their first lessons in cooperations, and its advantages. Very gradually they could be shifted to cooperative farming, emphasising the basic fact, that increased income for the cooperative, means increased income for all. Similarly cooperative credit and marketing could be started, with the members themselves imdosing a discipline. One basic factor here, to maintain an egalitarian structure, should be that no member is to have more than 25 acres. Gotsch's[57] comparative study of Comilla and Sahiwal reinforces the conclusion that where there is initial equality, the small and middle peasant group participate in the green revolution.

This is the second reason why I think a land reform is required to create and promote the middle farmer, i.e. the small peasant proprieter. Gotsch finds in the same study that.

(a) Wbere supplementary help was available, the small farmers achieved higher cropping intensities than large farmers.

(b) Cooperative members in Comilla had a much larger proportion of farm land under irrigation, and hence could avail of the new technology :

(c) Increases in acreage by cooperative members in the small size class created a great demand for labour, and required 50-70% more per acre. Shaw[58] also quotes USAID about Pakistan Punjab which showed that an absloute number of small farmers were producing the H.Y.V Large farms operated by tenants had a lower proportion of H.Y.V then small owner-operated farms.

Thus the creation of the small middle farmer, and his participation in a cooperative (with others of roughly the same wealth and status), and the green revolution, creating more demand for labour-intensive technologs, will diffuse some of the rural tensions and allow for a greater participation of the majority of the people in the countryside.

57. Gotsch (18).
58. Shaw (35).

A related measure to cooperatives is agro-based industries. The production of fertilisers, culture of seeds, development of pesticrdes, may create demands extending to the basic industries sector. Besides these, simple forms of mechanisation could be developed locally, e.g. simple diesal engines, animal-powered ploughs, seed-drills, "walking" tractors all of which are labour-intensive, require simple skills and little capital. Shaw quotes Daska as having grown into a centre for the manufacture of simple diesal engines for tubewells and grain mills. These agro-based industries will absorb the labour that may be displaced with increases in productivity, for although the new package can be more labour intensive, its main benefits are for the landholders.

A diversification of agricultural activities is desperately needed, for greater participation in the production of cereals will conflict with the demand conditions, support prices, private profits and world market conditions for grains.

Thus the farmers cooperatives should be encouraged to go into the cultivation of other crops. For example, vegetable and fruit use a great deal of labour, have a high value of output per acre, the income elasticity for their demand is high, and their processing would require industries and create employment. More or less, the same arguments go for dairy production, livestock and poultry farms and feedgrains production.

Integrated rural development programmes should be attached to these cooperatives and rural industries, providing employment for labour in the slack seasons, any displacements and, of course, the natural increases in the rural labour force. They could go in for terracing, water and soil conservancy projects, building roads, bridges, clinics, schools, tree planting etc. They would be fed by the cooperatives, and would mainly be provided with a basket of goods rather than money wages—to check inflation from the employment and income-creation.

Simple industries, like cottage industries or industrial homes could be set up to provide for the basic needs in the countryside. Given the increasing incomes, these industries, would not really spoil the market for the industries in the cities producing on a mass scale.

State trading boards should be set up to purchase directly from the farmers, thus elimineting the middle man and hoarder speculator, who exploit the fact that the small tanant or farmer has little staying power and do not apply the standard of the support price for him.

Subsidised shops in urban areas should be set up with ration cards given only to those below a certain income level, because it is the urban poor who are hit hardest with support prices that may be protecting the marginal farmer. For the rest of the urban consumers, there need be no subsidies. This would imply a dual price system.

In the end, I would like to say that even if some of the above measures are formulated, the commitment and organisation required for their implementation will not be adequate to have even a marginal impact on the social problems in rural areas. The grassroots participation that is needed for this social overhaul will not be relished or encouraged by the ruling elite which is already aware of the implication of mass mobilisation. The ruling class knows that this political awakening and consciousness of the people will one day make them want to control their own destiny. Already the genie is out of the bottle, and no amount of coaxing or intimidation is making him return there.

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# Disinvestment Policy of PIDC—A Case Study*

*Yasmin Hameed***

The Corporation has been a uthorised under section 14 (*b*) of the PIDC Act 1950 to sell or transfer shares held by it on behalf of the Government in companies sponsored by the PIDC when it "considers the time opportune.' During the ten years (1952-1962) of its establishment, the Corporation unloaded its holdings to the extent of Rs.16.70 crores. Public limited companies were floated for managing 37 out of 54 completed projects involving an investment of Rs.128.70 crores[1]. This paper is devoted to an anlysis of the philosophy of the disinvestment policy, its objectives and methods.

**Philosophy of Disinvestment**

The dictated policy of the Government regarding disinvestment precludes the PIDC from retaining the management and ownership of the projects set up in the public sector for long. The PIDC is expected to unload its holding and hand over the management to private parties at the first opportune moment if the conditions of such transfer are fulfilled.

The underlying philosophy of the policy of disinvestment is to reinvest the capital so retrieved in new fields.

Disinvestment is one of those basic activities of the PIDC which form a part of the very definition of the Corporation[2]. The Corporation functions with the sole purpose of working to achieve the highest rate of industrialization in the Country and with the express objective of an even geographical and industry wise dispersal. It performs this function most definitely not by laying its hand on the private sector's first priority, but by supplementing the efforts and industry of the private entrepreneur and reaching out to points where the private investor would ordinarily take years or even decades to reach.

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1. A. Iftikhar'', PIDC-a well rewarded National Enterprise ;''
2. M. Akram,'' Disinvestment Policy of the WPIDC ; Trade & Industry Jan, 1960 Page 67.

If sufficient private interest was present in an industry, like textiles, the PIDC strictly kept out of it. It entered only those fields in which private capital was scarce or shy in order to demonstrate the economic soundness and profitability of that project. The idea was not to hang on to that project indefinitely but just to show its feasibility and soundness and then to disinvest it as early as possible. This was also necessary because the capital funds were limited and could not be tied down permanently to particular projects. After disinvestment the capital available from it was then reinvested in some other projects. The role of PIDC was therefore a pioneering one. It never worked in a water tight compartment, but associated itself with the private sector, both in investment as well as in management in order to achieve an accelerated rate of industrial growth in the country.

The guiding principle for disinvestment according to the Act, has that "no such sale or transfer shall take place at a rate below the market quotation or below the par value of such shares without the previous sanction of the Central Government." The Corporation was required to sponsor as soon as possible public companies incorporated under Companies Act, 1913 for each approved scheme and act as managing agents till it considered appropriate or necessary to sell or transfer the shares. This obligation had been made flexible intentionally. A project sponsored by the PIDC might take 10 years to mature and after sometime start yielding a profit. At the same time another project might be completed in a shorter period and become attractive from the profit point of view at the very outset. It would, therefore, have been unjust to specify a time limit. The matter had been left to the discretion of the PIDC and this certainly added to the organisational stability.

This discretion was not always applied judiciously and the projects did get transferred prematurely. For instance, PIDC had been working for over a year on the establishment of two new Sugar Mills, on at Lyallpur and the other at Tando Muhammad Khan in the Lower Sind Barrage Area. Surveys were undertaken, projects prepared, approval of the Government obtained. Orders for machinery were placed abroad and just when things were about to get going, private parties showed their keenness to take over these two industries. Government gave its approval and the two projects were handed over to the private enterprise. Moreover, cases of corruption are not far when deliberate

losses were shown to have the projects disinvested cheaply. The evidence is that the very same projects showed profits immediately after they were transferred to the private sector. One such example is the Charsadda Sugar Mill. Finally it will be wrong to say that the Corporation did not hang on to the projects longer than was needed. There were projects with the PIDC which it had to keep for a long time for want of a buyer because the expected rates of returns were not very high or because there was not much scope for profiteering by the private sector. For, the private sector in this country had got used to an unusally high rate of return. Oftener than not, the private entrepreneur turned out to be riskless invester rather than a risk taker trying to maximise the fruits of creative enterprise.

Public industrial investment is undertaken only in those cases where private capital is not forthcoming, where a joint venture cannot be organized or where considerations of national interest dictate public investment[3],

There is no political or ideological edge to the combination which the Corporation sought to effect between Government initiative and finance with private enterprise. After carrying out the preliminary survey for which PIDC maintained a revolving fund, a report was sent together with all the relevant technical, economic and financial data, to the concerned Ministries of the Government. An effort was simultaneously made to attract private capital for the project. If it was not forthcoming at this stage, then PIDC carried out the project and again invite capital at the next stage, i.e., when the project was completed. If there was no success even at this stage than the project was eventually converted into a public limited concern. The role which PIDC evolved was that of a pioneer, philosopher and guide[4].

Public enterprises' help to and participation in the private sector is not something new, for it is already in vogue in some of the ECAFE countries like Phillipines and Burma. The guiding policy for state participation in the industrial enterprises in Phillipines amounts to limiting such participation only to cases where reasons of national interest require it or where such participation is desirable to stimulate private investment in a particular field. As such the

3. Government of Pakistan, Third Five Year Plan.
4. Iftikhar Ahmed "Industrialization through public Corporation" Foreword, March, 1963.

National Development Company, a public Corporation besides being engaged in commercial, industrial, mining, agricultural, and other enterprises extends financial help to private interest by the purchase of bonds or guaranteeing bonds issued by private parties. Similarly the Industrial Development Corporation of Burma, besides promoting the establishment and development of industrial enterprises, issued loans to private industries[5].

## Obejctives of Disinvestment

Disinvestment has been a clearly defined policy of the PIDC from the very beginning. The policy has been guided by the following well understood, though not strictly defined objectives :

1. To activise the private sector—Pakistan had received a very poor heritage of established industries at the time of partition. Muslims at the same time had no traditions of entrepreneurship, technical know-how and management. The first Industrial Policy 1949, was a clear commitment to the private sector, but the latter failed to prove its worth. So in 1950, decision to establish the PIDC was undertaken. But at this stage too the Government did not ignore the private sector. It was stated in the Character of the PIDC, that the Corporation would undertake industrial ventures initially but would quit in favour of the private industrialists as soon as the projects reached economic take-off and the private sector showed a keenness to take over the holding and management. So the basic aim of the disinvestment policy was to activise the private sector. As the years rolled by, the Corporation gradually succeeded in arousing the interest of private investors in its ventures and its extent can be gauged from the fact that the total capital outlay of Rs. 1307 million in PIDC's undertakings as at June 1962 was shared by PIDC and private enterprise in the ratio of 10:3[6].

2. To change the investment preferences of private capitalists. The Corporation has played a great role in changing the investment preferences of the private capitalists. Whatever private industrial

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5. Matin Kazi, "PIDC and the future Economic Development of Pakistan, Foreword June 1960, p-29.
6. Chairman's Review, PIDC Annual Report 1961—62. p.6.

undertaking was present was clearly limited to a few fields promising quick returns. For example, cotton textiles was very attractive to them, as the risk involved was the least. Thei ndustry started yielding a profit after two or three years. The Corporation demonstrated that industries involving heavier financial commitments, longer gestation period and greater industrial risks could also be attractive. After setting up such projects and showing their feasibility, the Corporarion invited private participation, thus altering the skewed preferences of private entrepreneurs.

3. To undertake the decentralization and dispersal of industries. Private enterprise preferred to install their plants at well established industrial areas of the country. They feared that if any industrial venture was undertaken in some backward area, raw material may not be available, technical skill may not be present, transport and communications facilities may be absent or inadequate. So they were not prepared to undertake the risk. The Corporation by establishing such industries in neglected parts, making available the required facilities and subsequently disinvesting such projects accomplished the difficult task of dispersing industries in all parts of the country. This task would have been beyond the private enterprise, if undertaken un-aided.

4. To use the recovered sum, for further industrialization. The main aim before the Governmet while establishing the PIDC was to initiate industrial development in the new born State. The authorised share capital of theCorporation is fixed and at the same time the funds are limited. It can undertake further industrial ventures, only if it recovers the sum invested in the already installed projects. If it does not undertake disinvestment, it will have to restrict itself to few fields, and retain the ownership and management of a limited number of projects, thus defeating the very purpose of the establishment of Corporation.

5. Speedy utilization of Government assistance. Usually the private sector came by many bureaucratic hurdles and procedural impediments in securing a speedy availability of internal, and in a more important way, external, finance with PIDC participation. However, the bureaucratic joints were some what softened. So an indirect encouragement was provided to the private initiative.

## METHODS OF DISINVESTMENT

It is the long term policy of the PIDC to disinvest all projects set up by it except those which are basic, and need to be controlled and operated by the State. The Corporation adopts various methods for associating private capital and disinvesting its projects :

(*a*) Sponsoring Limited Companies in association with private parties.

(*b*) Floatation of shares to General Public.

(*c*) Negotiations with Private parties.

(*d*) Inviting Public Tenders through advertisements in newspapers.

(*e*) Through the assistance of Financial Institutions.

Sponsoring Limited Companies in association with private parties.

The Corporation tries to associate private capital in its projects at the very outset. If a private party is willing then initial partnership takes place and the terms and conditions negotiated by the two parties. A Promoters Agreement so drawn up is sent to the Government for its approval.

A jointly sponsored project, generally a company, is floated where in a major shareof investment and the management ramain in the hands of the private party while the Corporation holds minority shares with suitable representation on the Board of Directors of the Company. The private entrepreneur is normally given a first right of refusal in respect of the minority shares held by the Corporation, but at a certain agreed price.

Later on, a trend towards joint management with the private sector was also visible. This pattern envisages joint management by private entreprenure and the Corporation and not merely joint investment. An example of such a joint management company floated by the Corporation is its collaboration with Burmah Oil Company (BOC) in running the Sui Northern Gas Pipeline. One third of equity capital is held each by the Corporation, B.O.C. and the general public. The Company is governed by its Board of Directors on which the three participants have equal representation.

### Floating of Shares to General Public

It is often difficult to persuade hard-headed businessmen to invest their capital in state sponsored projects at the initial stages. In such

a situation the Corporation establishes the project itself. After it has been completed and its soundness has been floatation. This has been laid down in the PIDC Act under section 14 and subsection (2) and (6).

The "Sub Section (2)" reads as follows :

The Corporation shall, as soon as may be, proceed to give effect to any scheme so approved by sponsoring public companies (hereinafter referred to in this section as the aforesaid companies) incorporated under the Companies Act, 1913, and independent of each other and having as their object manufacturing undertakings in the industry concerned.

Provided that before sponsoring any said company the Corporation shall obtain the approval of the Central Government to the Company's capital structure".

And the "Sub Section (6)" reads thus :

"The Corporation may issue the capital required by the aforesaid companies for public subscriptions and if any portion there of remains unsubscribed for a period of four months from the date of issue, that portion shall be subscribed for by the Corporation on behalf of the Central Government." But later on it may sell the portion subscribed by it to a private party when it considers appropriate.

**Negotiations with Private Parties**

According to "Section 14" and "subsection (3)".

"The Corporation shall, unless otherwise directed by the Central Government, acts as Managing Agents for the aforesaid companies, and may, with the prior concurrence of the Central Government, relinquish the managing agency in favour of any company."

The Corporation acts as Managing Agents for the Company sponsored by it where 100% or majority of the shares is in its own hands. As soon as the company becomes profitable, negotiations are held with private parties. Offers obtained are placed before the Government which is the final decision maker. Majority of the shares preferably 100% are transferred to the party which offers the most favourable terms. The management is also handed over, as soon as the Government gives its word in favour of a particular party.

**Inviting Public tenders through advertisements in newspapers.**

In the case of Limited Companies tenders cannot be invited for sale of the project but only the shares held therein could be offered for sale. The Corporation, therefore, invites public tenders for its projects which have not been converted into limited companies or for companies which are not quoted on the Stock Exchange and wherein it has 100% shareholding.

The Corporation invites bids by giving advertisements in the newspapers or by publicising its intention to disinvest its completed projects through press statement. The particulars of the projects/companies available for disinvestment are also circulated to the Chambers of Commerce and scheduled banks.

**Through the Assistance of Financial Institutions.**

The Corporations shareholding in companies which are quoted on the Stock Exchange is either unloaded in the market or through Financial Institutions like the Investment Corporation of Pakistan and National Investment Trust.

All disinvestment proposales require prior approval of the Government. The policy regarding disinvestment of Government capital through the sale of PIDC projects is finalised by a high powered Committee. This committee is empowered to consider or reject all such proposals. If the shares are quoted on the stock Exchange, then the Corporation cannot sell below the market value or the par value of the shares at the time of transfer without the previous sanction of the Government. The PIDC is never in a hurry to sell or transfer its projects but at the same time it is not prepared to overlook or neglect any reasonable offer that is made by prospective buyers. The PIDC is never prepared to sell its share at a loss, and would rather transfer its projects where market conditions are favourable. This is to forestall the tendency among the businessmen to prefer running concerns to those with sound liabilities.[7]

The Corporation has not sold or transferred its shares below par. Most of the disinvestment has been done at a premium. There is no fixed rule regarding the rate of profit or the premium but the process has been undertaken on the basis of the market quotation of the

7. The Chairman of the corporation complained about it in his interview with APP. on May 2, 1959.

shares in cases where the shares of the companies are quoted on the Stock Exchange on the basis of the amount of Government funds invested plus a certain rate of interest ranging from 6 to 8% from the date af investment to the date of disinvestment. This is in addition to the dividend or share of profit which is received by the Corporation on its invesment in a limited company or project sponsored in association with a private party.

In certain cases specific provisions are made for disinvestment in the promoters Agreements to obtain certain additional ends. In such cases the disinvestment is effected according to the provisions of the respective agreements.

Whenever a private party acquires a majority of the shares, the management is automatically transferred. It is not obligatory on the private party to pay the sum at once. The Corporation is usually prepared to accept payment in instalments, spread over a number of years, as negotiated by the two parties. Usually the pattern is 25% down payment, 75% deferred payment secured by a bank guarantee carrying 6 to 8% interest.

Foreign capital can also buy PIDC projects offered for sale in the process of disivestment[8]. The DDT Factory, Nowshera was disinvested to Technical enterprises which is an American company.

Emphasis on private participation in the industrial ventures of the PIDC does not however mean the curtailment of its sphere of activity. It continues to play the pioneering role in the industrial development of the country, as the amount recoverd by the act of disinvestment is ploughed back into further industrial development, thus keeping up its brisk industrial activity.

The procese has exercised a salutary influence on the economy of Pakistan and has contributed towards checking lop-sided development.

## PART II

In this section a study of comparative profitability before and after disinvestment of Charsadda Sugar Mills has been undertaken. This mill was established at a cost of Rs.15 million with a capacity of 18,000 tons of Sugar per annum, and it was designed to employ 2,000 persons. It was launched into operation in Aug. 1956, after remaining under PIDC for one year. Its management was handed

8, Ibid

over to the Khan of Hoti Group in 1958. It may be pointed out that originally the PIDC had decided to manage the mill for atleast 20 years. But then it was suddenly decided on 4th Feb. 1958, to hand it over to private Sector for reasons not well explained.

In table I Given at the endwe have calculated the cost of production for the years1956-62. Analysing the various items individually we come across certain ambiguities and some interesting facts arerevealed. The first item on the list is the amount of sugar in process at the start of a production year. Since the plant started operation in 1956 the balance is nil. In the beginning of 1957-58 sugar in process was worth Rs. 1,075 whereas at the close of the year it was worth Rs.1,250; hence the carry over stock of 1958-59. The sums of Rs.16,500 and Rs.39,488 are the respective money value of sugar in process at the opening of the years 1959-60 and 1960-61. In 1961-62 the balance is nil.

Next on the list is material consumed, the raw material used in the production of sugar is cane, beet and beet seed. For the first two years sugar was extracted from cane. Only from 1958-59 onwards beet and beet seed were also used to extract sugar, production of sugar has reacted to fluctulations in sugar-cane crop. The years show a net loss when the crop failed or was poor owing to bad weather. In 1956-57 the output of sugar-cane was low compared to 1957-58, there was a difference of Rs.60;46,060/- measured in monetary terms. In 1958-59 the crop was again poor, it fell to Rs.125,31,700/- though this amount includes both beet and sugar-cane for the first time. The year 1960-61 was worst when material consumption declined so much that the plant operated at 50% of its normal capacity. Comparing the year 1960-61 to 1956-57 material consumed fell by 10% but cost rose hy 11%. The year 1961-62 was favourably placed in context of beet and cane-crop. The material used more than doubled in one year, so much so that it over-shot the level attained in 1957-58, the year which yielded maximum profit.

Item three includee direct as well as indirect wages, salaries and bonus. It is seen that when production of sugar is high more is paid to the employees as remuneration.

PIDC spent very little on repairs and maintenance, even less than half the amount spent in 1957-58. As the plant started operation in 1956, probably it did not require much repair, and the small

amount that was spent was incurred on maintenance. But this comparison may be odius, public enterprises often neglect this part and often a machine out of gear remains so, far back of interest. The long procedures for sanction from high officials are time consuming and the person concerned having no personal motive do not pay much attention.

'Other manufacturing expenses include miscellaneous expenditure. This item is very important for the private sector, as it is here that they show their tricks. PIDC in 1956-57 spent a nominal sum of Rs.31,389 but the private entrepreneur during the next year spent three times more.

Depreciation is an inevitable expenditure. This amount has varied. Taking 1956-57 as base (PIDC's management) we see that it was 12% more in 1957-58. Next year it was 18% less and again 5% more in 1959-60. In 1960-61 it was 80% less and finally in 1961 62 it was 17% less.

Insurance charges ar another important item in calculating the cost of production. PIDC paid less insurance compared to private management.

PIDC's expenditure on power, store and spares is not given. Probably the Corporation had set up its own generation plant, but even then the expenditure must be included; as electricity bill forms an important part of the cost of production. This means that the cost of production showed in the balance sheet is lower than the original figure, therefore, the net loss encountered by PIDC was much higher than depicted. In 1957-58 the amount spent (Rs.13,80,755) is highest since production that year was also maximum. In 1958-59, Rs.8,20,485/- were spent and in 1959-60 Rs.9,74,845/-. The amount fell to Rs.3,02,757/- in 1960-61 as this year was worst when production was lowest at 9,519 tons. However, the amount spent rose to Rs.7,25,277 in 1961-62.

Welfare expenses were undertaken only in 1957-58 the year yielding highest profit and at the same time being the first year of production under private management. Though public enterpises are supposed to undertake more welfare schemes, the mill remained under PIDC for a brief period of one year and welfare expenses were none on account of the loss incurred.

To arrive at the cost of production sugar in process must be accounted for. A glance at the figure shows that the cost of production is directly related to the scale of operation. Except for one year, as the scale extended cost of production rose. It should not be implied that cost of production in absolute terms rose. It is quite possible that cost per unit might have even fallen.

Gross loss/profit is arrived at in Table II Given at the end by subtracting cost of sales as calulated in Table I from actual sales and adding incomes from miscellaneous sources. The cost of Sales includes three items, opening stock, cost of prouction and central excise duty. Opening stock is the amount of sugar in process at the close of the year therefore, it was subtracted in table I to arrive at the cost of production. The cost of production as calculated in Table I is the next item and the excies duty added to the above two gives us the cost of sales. The quantity which remains unsold at the end of the year is excluded.

Actual sales-the earnings from selling a certain quantity of sugar in one year is the quantity from which cost of slaes is subtracted to arrive at the gross loss or gross profit as the case may be. But to this amount must be added miscellaneous incomes like interest and profits earned, dividends received, to arrive at the overall gross profit figure.

The year 1956-57 shows a gross loss of Rs.9.70 lac where as 1957-58 shows a gross profit of Rs.89 lakhs—a difference of Rs.98.70 lakhs. 1959-60 and 1960-61 are the years in which the balance sheet shows a gross loss under private management. But the loss is evened out in 1960-61, when miscellaneous incomes are added. Thus it is seen that year 1959-60 is the only year under private management which underwent gross loss.

In table III we calulate the net loss/net profit as follows :

$$N = G - E$$

Where N is net profit/loss, G is gross profit/loss and E is total expenses other than cost of production. G is the figure arrived at in table II, E includes total expenses on administration like establishments, depreciation, selling and distribution, conveyance, audit fee, interest and other such expenditures.

Looking at Table III Given at the end comprehensively, PIDC in 1956-57 spent a nominal sum af Rs.4,386 on selling and distribution. But under private management in 1957-58 the expenditure increased fourfold. This jump is rather surprising as this industry was never so competitive as to involve wastes of competition. Again sugar is a product of wide consumption and the expenditure through advertisements and product variation to make it attractive and popular amongst the consumers seems superfluous.

PIDC's administrative expenses are greater comparrd to private management. This is due to the fact that public enterprises often have elaborate establishment, huge cost of permises,furniture and an army of workers who are employed just for the sake of employing them. Public enterprises are also required to employ maximum number of workers to help solve the unemployment problem of the country.

The Director's allowance and fee has increased over the years. Under PIDC's management Rs.5478.00 were paid on this account. The next year under private management it doubled. In 1958-59 it remained almost constant. In 1959-60 it was Rs.64,908.00 i.e, 5 times compared to 1958-59, even though this was year of loss. In the next one year there was still another increase of approximately Rs.6000.00 In 1961-62 the amount paid was only Rs.16000.00. All these payments do not fit into a pattern. The erratic behaviour of directoral allowanees only serves to point out a casual dispensation of the shareholder's money. The audit fee includes all professional charges, which were Rs.12,409.00 in 1956-57-under private management in 1957-58. The next year Rs.21,358.00 were paid. In 1959.60 the amount increased to Rs.24,530.00 In 1960-61 the audit fee was Rs.21,188.00 and Rs.24,909.00 in 1961-62. It would be noted that depreciation appeared in Table I as well and it might be inferred that there is duplication, but actually here it involves depreciation of building and furniture whereas previously it was depreciation of plant and machinery.

The amount paid as interest and other bank charges was large under private management which means that they carried on the operation of the mill chiefly with borrowed money. In 1957-58 Rs.4,49,742.00 were paid as interest, since the year was very successful the private managers were optimistic and hence borrowed a greater sum and in 1958-59 the interest paid rose to Rs.5,44,011.00, As

during this year business was not good enough, the mill faced a loss of Rs.7,42,668.00 hence a smaller amount was borrowed so that the sum paid as interest in 1959-60 fell to Rs.3,62,877 00. During this year even a lower sum was borrowed. Accordingly Rs.2,46,941.00 were paid to the banks. Even in 1960-61 the factory could not make good its losses. No doubt the losses were smaller than the previous year but the very fact that the mill was running at a loss enough to act as a disincentive on the part of private borrowers, accordingly Rs.1,70,459.00 were paid as interest in 1961-62.

There are obviously ambiguities in the amounts given to managing agents as office allowance and commission. But this is attributable to the prevailing system which was defective in itself. Under PIDC's management, Rs.21,548.00 were given as office allowance and naturally none as commission. The office allowance for next three years remained at Rs.24,000,00. In 1957-58 a net profit of Rs.73,28,413.00 was earned and Rs.5,94,195.00 were given as commission. This is evidently a large sum. For this next three years the mill encountered losses and hence no commission was paid. In 1960-61 though the mill was running at a loss of Rs.7,67,218.00 the office allowance jumped 4 times, and reached the level of Rs.1,02,210.00. In 1961-62,however, it fell to Rs.63,548,0 the but since mill earned a net profit of Rs.4,19,233.00 Rs 33,992.00 were paid as commission to the managing agent. If we look at the figures of thetwo years when commsision was paid it is seen that it was 8% percent calculating the percentage in relation to, the amount of profit.

Managing agency system has been abolished by the persent government. There were certain built-in defects in the system not suited to the industrial climate of the country. While deciding about the output to be produced, costs and benfits as such were not taken into account. The greater the output, the higher the managing agents commission. Hence their aim was to maximize output even though it might be contrary to the interest of the firm. Moreover, managing agents were not trained technical hands and more often the allocation of available resources was not optimum. The Directors had no say in the policy making, neither had the shareholders any voice. The latter were thus not inclined to increase their shares further. Illegab commissions were quite common· All these factors were not conducive to preparing a should industrial base and thus the system had to be replaced. It was abolished under the order called "Managing

agency and Election of Directors order 1972" According to the new order the shal eohrderswill have a just say in the policy making[9].

Three items namely bad debts, stock exchange, registration fee etc, were under taken by the PIDC only though the sum was small.

Again we find neglect on the part of PIDC to repair and maintain. Though private entrepreueur did not spend a very large amount but it has been constantly taking care of repairs and maintenance of building and furniture etc. There can be two possible reasons for the neglect in 1956-57. Firstly it was the first year of operation, PIDC did not think it proper to undertake any such expenditure.

Secondly, unlike the private sector it is not a personal concern, the profits do not go into personal pockets and hence the neglect.

Only PIDC has made a provision for payment of dividend on preference shares of the company to the extent of Rs.3 lakhs.

Again, PIDC undertook experimental and developmental expendi ture of Rs.1,49,416,00. Private management as ever did not bother to undertake reaserch schemes or experiments. If we trace the industrial history of our country we see that such attitude on the part of private enterprise has been quite common. They do not bother to install modern plants, use new methods and discover new products. What to speak of introducing modern plants they do not care to replace the existing machines untill they become obsolete. The people in our country fear reserch. Such attitude should be revised. If we do not try to make an attempt at new things we cannot progress. fI the private entrpreneurs spend a nomial sum of their profits on research and development they would be able to increase their profits further.

It is to be noted that our business men are aware of the needs of the poor and have sanctioned sums as donations. It looks rather funny that such a big concern had allocated Rs.700.00 as donations in 1962-63.

Next item on the list is establishment charges like salaries and bonus. For the first two years i.e 1956-57 & 1957-58, figures are

9. Fizaur Rehman, 'The New Industrial order' Govt. College, Economic Journal, Jan-June 1972 Vol. v No. 1 P.12.

not available or probably the sum paid as salaries and bonus were put under some other head.

The last item is miscellaneous expenses such as postage, telephone, telegraph, entertainment, printing and stationary and other head office expenses.

Comparing the results arrived at, we see that except for 1957-58 and 1961-62, The mill has been running at a loss under PIDC, the net loss has been the highest i.e. Rs. 19,77,745.00. When the mill was handed over to private management it not only made good the loss but also yielded a net profit of Rs. 73,28,413.00 in one year. It is said that during the year the crop output was very good and therefore the profit.

The next year under private management too the mill underwent a loss of Rs.7,42,66.800. In 1959-60 the losses were more than doubled. In 1960-61 the loss was almost the same as 1958-59. In 1960-61, however a net profit of Rs. 4,19,233.00 was earned.

The reasons for the losses as given by the managing director lies in bad crop of sugar-cane-due to natural causes, like frost etc, the sugar content in cane was very low. The efforts during these years were aimed at not making a profit but minimizing the inevitable losses.

No doubt the crop output does have its effect but such wide fluctuations in the profit and loss accounts cannot be solely attributed to crop failure. There has been some sort of shuffling in the figures. Since no dividend was paid during the three years of loss it makes one think if private sector is on its cleaver traits showing losess and escaping taxes to the government and dividend to the share holders.

Though PIDC faced a loss of Rs.19,77,745.00 under its management some credit must be given for the initiative. The very fact that an industry which was badly needed by country was created is no small thing. When a factory is established it is never expected that it would start yielding a profit from the very beginning especially durning the phase of increasing costs. Moreover, PIDC could be criticized only if during the subsequent years there would have been no losses at all. It is seen that even under private management for three years the mill faced losses. No doubt the net loss was highest in 1956-57, which to a certain extent can be attributed to the inexperi-

ence of public sector and partly to the employment, security and fair price constraints that are put on such corporations by the government to achive its own socio eeonomic policies. Public sector has to regulate its actions according to the changing policy of the Government. The sugar industry of the country was established at grat cost in line with the country's import-substituting policies. A study was undertaken in 1970 and it was estimated that cost of production of sugar in Pakistan was 200% more compared to the cost in the world market. Foreign exchange worth 25.446 million dollars could be saved annually by importing sugar rather than producing it at home.[10]

## PART III

### Summary and Conclusions

The purpose of this study is to afford an analytical insight into the most controversial aspect of the PIDC activity i.e. the policy of disinvestment or privatisation, so that a basis is laid down for making a judgment over the comparative relevance of the public and private sectors as an instrument of accelerated economic growth and its equitable distribution.

The disinvestment policy as such has been discussed in section I. It is seen that there are contradictions, inconsistencies and disunity in the formulation and implementation of the disinvestmemt policy. Though disinvestment was inherent in the statutory structure of the PIDC, it served private rather than public interest. It goes without saying that public organisations are constituted to promote public interest alone. The PIDC mandate was prepared for the vested interest, by their agents and Government for the exploitation of the people.

One is at a loss to understand that the initial risks, hazards, uncertainities of investment were insured against by the public exchequer, but the on the ground projects were handed over to the profiteers dirt cheap. Then the whole process of privatisation was an exercise in the clumsiest form of manipulation. The common pattern was some what like this : collusion between PIDC bureaucrats and potential buyers to show losses and depress stock values purchase by the private owner at these distorted rates, bullish manouvring of

10. Parvez Tahir "The Price misbehaviour" Govt. College., Economic Journal July-Dec 1972 Vol. V No. 2 P-104.

stock prices to entice the commercial banks, whose ownership was interlocked with industry to get a loan for the purchase and thus to own a publically installed projects at no cost to oneself.

An interesting example of how public sector was made to serve private sector is the Jauharabad Sugar Mills. It was installed by the PIDC but was then handed over to Kohinoor group, which utterly failed to secure its optimal operations. The mill was given back to the PIDC, which successfully removed the operational difficulties and speeded up production within a period of three years, only to give it back to the private owners. The PIDC management is proverbially inefficient, but the private management is no engine of productivity either.

The Charsadda Sugar Mills—a detailed study of which has been undertaken in Section II, presents a rather funny picture. If we have a look at the graph drawn to potray the profit and loss account, the very shape of the curve depicts an unusual pattern. For one year under PIDC management the Mill encruntered a loss of Rs.19,77,74[illegible].00 but under private management there is an abrupt rise and the accounts show a tremendous leap. Then again there is a downfall. Such absurdity is unaccountable. One cannot help wondering if the managing agents have been playing with figures.

The private sector is always hesitant to take up any concern which is running at a loss. No such tendency has been encountered in case of the Charsadda Sugar Mills. Perhaps the private sector was responsible for the under quotations at the time of transfer. The big profit account more than potraying the efficiency shows that something is fishy. Minor differences, even moderate ones, can be overlooked but such a great difference as Rs. 98 lacs cannot be ignored.

Our basic policy conclusion is that the fault lies not with project disinvestment as such, for the PIDC must disinvest to have enough capital to go ahead with the gigantic task of industrializing the country. The snag lies in restricting the right to purchase disinvested projects only to the private capitalists. The critical deficieny in the PIDC is the managerial gap, but this gap could be bridged in a much better way by creating professionally motivated, autonomous agencies at the central or provincial levels. There could also be constituted a Board of Industrial Management for all the disinvested projects for

achieving macro-efficiency and micro flmexeibility and streamlining the decision making process. Even now the P DC controls ten percent of the total assest in the country. Its operational efficiency will be greatly enhanced if it concentrates on designing planning and implementing projects. The moment such projects are completde they could be transferred to the recently set up Board of Industial Management for taken over units. The taken over units contribute eight percent of the industrial assets in the country. If the Board is found to be preoccupied with the taken over units, the projects could be handed over to a seperate organization. Another possibility is to transfer the projects to the provinces. For instance the Punjab Government is thinking of setting up its own textile and vegetable ghee mills in competion with the private sector. One will imagine that PIDC will step in here to help the provinces. Of course the above argumentation is based on the disposition that it is only the expanding public sector which can deliver the masses in this country from the worst forms, of poverty.

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TABLE I

CHARSADDA SUGAR MILLS

COST OF PRODUCTION FOR YEARS 1956—62 (In Rs.)

| | Under PIDC management 1956—57 | Uunder private management 1957—58 | Under private management 1958—59 | Uuder private management 1959—60 | Under private management 1960—61 | Under private management 1961—62 |
|---|---|---|---|---|---|---|
| Sugar in process ... | — | 1,075.00 | 1,250 | 16,850 | 39,488 | — |
| Material consumed ... | 86,77,124 | 1,47,23,184 | 1,25,31,700 | 1,23,15,870 | 77,91,292 | 1,74,79,448 |
| Wages and Bonus ... | 4,27,122 | 10,60,712 | 8,60,958 | 7,92.300 | 9,47,635 | 9,36,919 |
| Repair and maintenanee ... | 1,09,360 | 5,79,575 | 7,81,818 | 9,99,454 | 8,61,370 | 7,98,072 |
| Other manufacturing expenses | 31,389 | 1,02,481 | — | 44,777 | 1,19,954 | 11,053 |
| Depreciation ... | 13,53,865 | 15,17,899 | 11,14,610 | 14,25,417 | 12,46,225 | 11,21,458 |
| Insurance ... | 20,196 | — | 73,676 | 65,766 | 76,033 | 46,256 |
| Power, stores and spares ... | — | 13,80,755 | 8,20,485 | 9,75,845 | 3,02,707 | 7,25.277 |
| Welfare expenses ... | — | 73,506 | — | — | — | — |
| Gunny bags consumed ... | — | — | — | 5,08,882 | 3,60,032 | — |
| Beet pulp transport expenses | — | — | — | — | 39,686 | 85.960 |
| Carriage, loading, un-loading of cane and beet ... | — | — | — | — | — | 1,96,588 |
| | 1,06,19,056 | 1,94,39,187 | 1,61,84,497 | 1,71,73,891 | 1,17,84,475 | 2,13,95,031 |
| Sugar in process ... | — | 1,250 | 16,580 | 39,488 | — | — |
| **Total ...** | 1,06,19,056 | 1,94,37,937 | 1,62,01,077 | 1,70,34,403 | — | — |

## TABLE II

## CHARSADDA SUGAR MILLS

### GROSS PROFIT / LOSS FOR YEARS 1956—62 (In Rs.)

| | Under PIDC management 19 6—57 | Under private management 1957—58 | Under private management 1958—59 | Under private management 1959—60 | Under private management 1661—90 | Undea private management 1961—62 |
|---|---|---|---|---|---|---|
| COST OF SALES | | | | | | |
| Opening stock ... | — | 41,48,712 | 1,93,05,401 | 1,85,18,429 | 1,16,40,968 | 36,146 |
| Cost of production ... | 1,06,19,056 | 1,94,37.937 | 1,69,01,077 | 1,70,34,571 | 1,17,84,475 | 2,13,95,031 |
| Central Exicise Duty ... | 14,62,992 | 37,95,540 | 30,07,154 | 29,34,571 | 15,86,547 | 25,83,334 |
| | 1,22,82,048 | 2,73,82,189 | 3,84,87,473 | 3,84,87,473 | 2,50,11,990 | 2,40,14,511 |
| Closing stock ... | —41,60,659 | —1,93,05,401 | —1,85,18,499 | —1,16,40,968 | 36,146 | —95,93,862 |
| | 79,21,389 | 80,76,788 | 1,99,61,973 | 2.68,46,505 | 2,49,75,844 | 1.44,20,649 |
| Actual sales ... | 69,50,937 | 9,69,70,797 | 2,02,95,813 | 2,63,04,142 | 2,47,53,381 | 1,61,93,613 |
| Cost of sales ... | —79,21,389 | —80,76,788 | —1,99,61,973 | —2,68,46,505 | —2,49,75,844 | 1,44,20,649 |
| Gross Profit/Loss ... | —9,70,452 | +88,94,009 | +3,33,840 | —5,42,363 | —2,22,463 | +17,72,964 |
| Miscellaneous Income | 5,499 | 6,083 | 3,959 | 6,602 | 34,235 | 23,082 |
| Interest earned ... | — | — | 2,348 | — | — | — |
| Excess provisions written off | — | — | — | — | 3,92,171 | — |
| profit on sale of Assets ... | — | — | 4921 | — | 1,32,930 | — |
| Income from CSM development farm | — | — | — | — | — | 2,25,796 |
| | —9,65003 | +89,00,092 | +3,45,068 | —5,35,761 | +3,36,930 | +20,21,840 |

## TABLE III
## CHARSADDA SUGAR MILLS
## NET PROFIT / LOSS FOR YEARS 1956—62 (In Rs.)

| | Under PIDC management 1956—57 | Under private management 1957—58 | Under private management 1959—59 | Under private management 1260—61 | Under private management 1960—61 | Under private management 1961—62 |
|---|---|---|---|---|---|---|
| Advertisement ... | 4,386 | 17,418 | 36,437 | 30,054 | 58,626 | 5,406 |
| Administration expenses ... | 3,84,908 | 3,17,050 | 1,61,758 | 2,11,020 | 51,153 | 1,12564 |
| Directors fee & travelling ... | 5,478 | 11,629 | 11,272 | 14,508 | 38,294 | 16,331 |
| Directors allowance ... | — | — | — | 50,400 | 30,999 | — |
| Audit fee ... | 12,409 | 15,000 | 21,358 | 24,530 | 21,188 | 24,909 |
| Depreciation ... | 26,919 | 41,422 | 16,158 | 13,416 | 94,893 | 1,00,685 |
| Interest and Bank Charges ... | 29,615 | 4,49,742 | 5,44,011 | 3,62,877 | 2,46,941 | 1,20,459 |
| Managing agents office allowance | 21,548 | 24,000 | 24,000 | 24000 | 1,02,210 | 63,548 |
| Managing Agents commission | — | 5,94,195 | — | — | — | 33,992 |
| Bad Debts ... | 169 | -- | 41 | — | — | — |
| Stock exchange registration ... | 500 | — | — | — | — | — |
| Preliminary expenses written off | 77,334 | — | — | — | — | — |
| Repair and Maintenance ... | — | 47,223 | 41,564 | 53,351 | 60,218 | 34,476 |
| Provision for payment of dividend | 3.00,000 | — | — | — | — | — |
| Experimental and Developmental expenditure writtea off. ... | 1,49,416 | — | — | — | — | — |
| Donations. ... | — | — | 28,200 | 35,000 | 7,301 | 700 |
| Establishment—salaries of bonus other expenses— ... | — | — | 2,02,931 | 3,13,143 | 3,52,822 | 5,01,423 |
| (Postage, telephone, telegraph, printing, stationary and office expenses ... | — | — | — | — | 62,120 | 61,644 |
| Total Expenses ... | 10,12,742 | 15,71,679 | 10,87,736 | —11,32,299 | 11,04,009 | 16,02,607 |
| | —9,65,003 | 89,00,092 | 3,45,068 | — 5,35,761 | 3,36,891 | 20,21,840 |
| | —10,12,742 | —15.71,679 | —10,87,736 | —11,32,299 | —11,04,009 | — 16,02,607 |
| Net Profit/Loss ... | —19,77,745 | +73,28,413 | —8,42,668 | —16,68,060 | —7,66,218 | +4.19,233 |