

WORKER COMPENSATION AND INCOME DISTRIBUTION IN AGRARIAN ECONOMIES: Patterns and the Underlying Organization

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ABSTRACT

The agrarian economies of the developing countries have displayed throughout history many wage and income distribution patterns, which are the bases for the various models of the rural social class structure. Notable among these models are the neo-classical economic theory, the peasant agricultural system, the mixed peasantry and tenancy system, the feudal system, and the dual system. This paper attempts to show that these models only represent various phenomena which may arise when the social organisation of an agrarian economy functions under different socio-technical conditions. Thus, organizational variables appear to be promising instruments for policy intervention for economic development, which should aim at affecting the role behaviour of the actors in the social organization instead of merely attempting to alleviate symptoms of under-development.

1. INTRODUCTION

Many patterns of worker compensation and income distribution have been observed in the rural economies of the developing countries at various times in history¹. Many models of the rural social class structure have been developed to explain these patterns. These models often view the rural economies as systems whose social class structure is given a priori. Thus, the various wage and income patterns have been attributed to the presence of any one of these: a perfect market system, a peasant production system, a mixed peasantry and tenancy system, a feudal system, or a dual system.

This paper attempts to show that the wage and income patterns attributed to the various social class systems can arise from a single set of organizational arrangements that describe the information structure of an agrarian economy operating under slightly different socio-technical environments. Although this paper is primarily concerned with distinguishing the various wage and income distribution phenomena from the social organization generating those phenomena, the analysis presented has important implications for the design of public policy for rural development. At the outset, the adoption of an organizational view of an agrarian economy makes it possible to treat development policies as instruments of organizational change. Thus serious doubts arise about the

efficacy of the development policies which attempt to alleviate behavioral symptoms such as capital shortage, unemployment, and low productivity by increasing capital formation, creating jobs, and implanting productive technologies without considering the social organization which has created those symptoms. At the same time, administrative and technological instruments, that provide informational inputs affecting the roles of various actors in the social organization, are indicated as effective means of change².

The analysis of this paper follows the system dynamics method introduced by Jay W. Forrester³. A computer model of the social organization of an agrarian economy is developed and its behaviour studied through simulation. The technical details of this model are given in Saeed: 1980⁴. These details and a machine readable version of the model written in DYNAMO II are available from the author on request. This paper includes only a brief discussion of the model structure and a general description of the characteristics of the socio-technical environment whose interaction creates the various wage and income distribution patterns.

2. WAGE AND INCOME DISTRIBUTION PATTERNS

The wage and income distribution patterns described by the various models of the agrarian economies are given in the following. These descriptions often relate the end equilibrium conditions rather than the dynamic behaviour. However, the tendency to attain the suggested end equilibrium in each case can be viewed as the dynamic behaviour. These tendencies will serve as a reference mode for the model. Such a qualitative definition of the reference mode is also necessary because the quantitative data describing the wage and income distribution histories of the developing countries is not available.

The neo-classical economic theory describes a largely hypothetical perfect market system which is rarely encountered in the real world. In this system, all production factors, including workers, are paid according to their respective marginal revenue products. Furthermore, production factors are allocated by an invisible hand to the most efficient production sectors, who strive to maximize profit. Ownership of land and capital by specific sectors is seen as a market imperfection⁶. Thus, ownership is either communal or very widely distributed. In both cases, land and capital rents will be more or less equally shared by all households. Thus, the perfect market system does not include explicit mechanisms of income distribution but makes broad assumptions about these. Even though hypothetical, the neo-classical

model incorporating a tendency to achieve perfect market equilibrium serves as a reference mode which the social organization of an agrarian economy may generate if the special assumptions about ownership, worker compensation, and the profit maximizing behaviour of all sectors are fulfilled.

In the peasant production model, all farming is done by the self-employed workers who own the land they till. In such a system, the size of a farm will be limited by the size of the family providing labor for tilling this farm. Thus, family income will be proportional to the size of a family and income distribution will be, more or less, uniform. Since there are no wage workers, worker income will equal his average revenue product, less his share of tax burden and his contribution to maintenance of the family farm⁷.

In the mixed peasantry and tenancy model, land ownership is divided between the self-employed peasants and the absentee landowners who employ share-croppers. Usually, there is no clear difference between a land owning peasant and a share-cropper. A typical working household may engage in both farming practices. The average income level of these households will depend on how much of the production is siphoned off by the absentee landowners. This, in turn, is determined by the distribution of land between the working and the non-working households. The number of the non-working households, however, must be small irrespective of their income share, as otherwise, a large part of the workforce will appear idle. This inference is borne out by ample empirical evidence from the developing countries where small enclaves of affluence exist side by side with widespread poverty⁸.

In the model of a feudal system, land is almost completely separated from the workers. Thus, most workers are tenants of the landowning households, who obtain a large share of the income. Consequently, the income of the working households is small. Again, there are no wage-workers. Such a land and income distribution pattern has been observed in many developing country agricultural economies using an undifferentiated agricultural technology⁹.

Lately, the share-cropping practice has been partly replaced in many developing countries by capitalist farming employing wage workers. This has created three land-management categories: self-employed peasant farming, share-cropping, and capitalist farming¹⁰. The last category of farming also distinguishes itself from the other two in its use of modern implements and inputs. The capitalist farming sector is often termed the modern or the formal sector, while the peasant-run farming sector is referred to as the traditional or the informal sector. The side by side existence of the modern and traditional sectors has led to the creation of what is known as the dualist model which was first proposed by Boeke in 1947¹¹. The modern sector appears to be efficient and prosperous, while the traditional sector appears to be inefficient and stagnating¹². However, in most cases, worker incomes in the two sectors are not very different. As for income distribution among the households, large disparities exist between the capitalist and worker households, although, the number of the capitalist households is invariably small¹³.

3. THE AGRARIAN INCOME DISTRIBUTION SYSTEM

When ownership of land is socially accepted and legally upheld, farmland may appear in the various ownership and

management categories shown in Figure 1(a). Farm capital other than land will appear in similar categories as shown in Figure 1(b), and workers will be either wage-employed or self-employed as shown in Figure 1(c). The quantity of the production factors in each category may vary depending on the flows occurring between the various categories. These flows, in turn, are governed by the decisions of the producers, the consumers, and the suppliers of the production factors acting according to their roles in the social organization. The behaviour of these actors may vary when changes occur in the socio-technical environment, thus causing the flows between various categories of factors to change¹⁴. However, all categories shown in Figure 1 will potentially exist at all times.

The farm production is distributed among the households on the basis of the factors of production contributed by them as shown in Figure 2. Various theories have been advanced about how rents for the production factors are determined. According to the neo-classical school, these rents depend on the marginal revenue product of the respective production factors¹⁵. According to the Marxist school, they are at the discretion of the capitalist who disburses a subsistence wage to the worker and appropriates the rest of the production for himself¹⁶. In fact, both these postulates are phenomenological and can arise out of the bargaining positions of the claimants to production, which may change over time. The following analysis attempts to show this.

4. BEHAVIOUR OF THE AGRARIAN INCOME DISTRIBUTION SYSTEM

The model used to study the behaviour of the agrarian income distribution system incorporates the mechanisms of allocation of production factors to the various categories of farming and the mechanisms of disbursement of income discussed in section 3. The model incorporates the following assumptions:

1. The aggregate demand for production consists of the demand for agricultural goods for the whole of the country, and for consumption goods and services and farm capital needed within the rural sector when exogenous supply of these is absent or limited.
2. The economy consists of a capitalist sector and a self-employed sector. Both sectors are price takers and compete with each other for the resources of the economy. However, while the capitalist sector hires workers on the basis of economic efficiency, all workers not offered employment by the capitalist sector are accommodated in the self-employed sector.
3. Production is carried out using land, workers, and farm capital. All production factors are of the same quality irrespective of the sectors employing them, unless this limitation is relaxed. Output is of homogeneous quality and can be allocated to any demand source.
4. All resources of the economy are employed. A production factor, however, may be intensively or extensively employed in a given sector depending on the relative factor proportions.
5. Urban rural migration, income transfers, and flow of goods are all fixed. Also, rural population and labor force are all fixed unless stated otherwise.

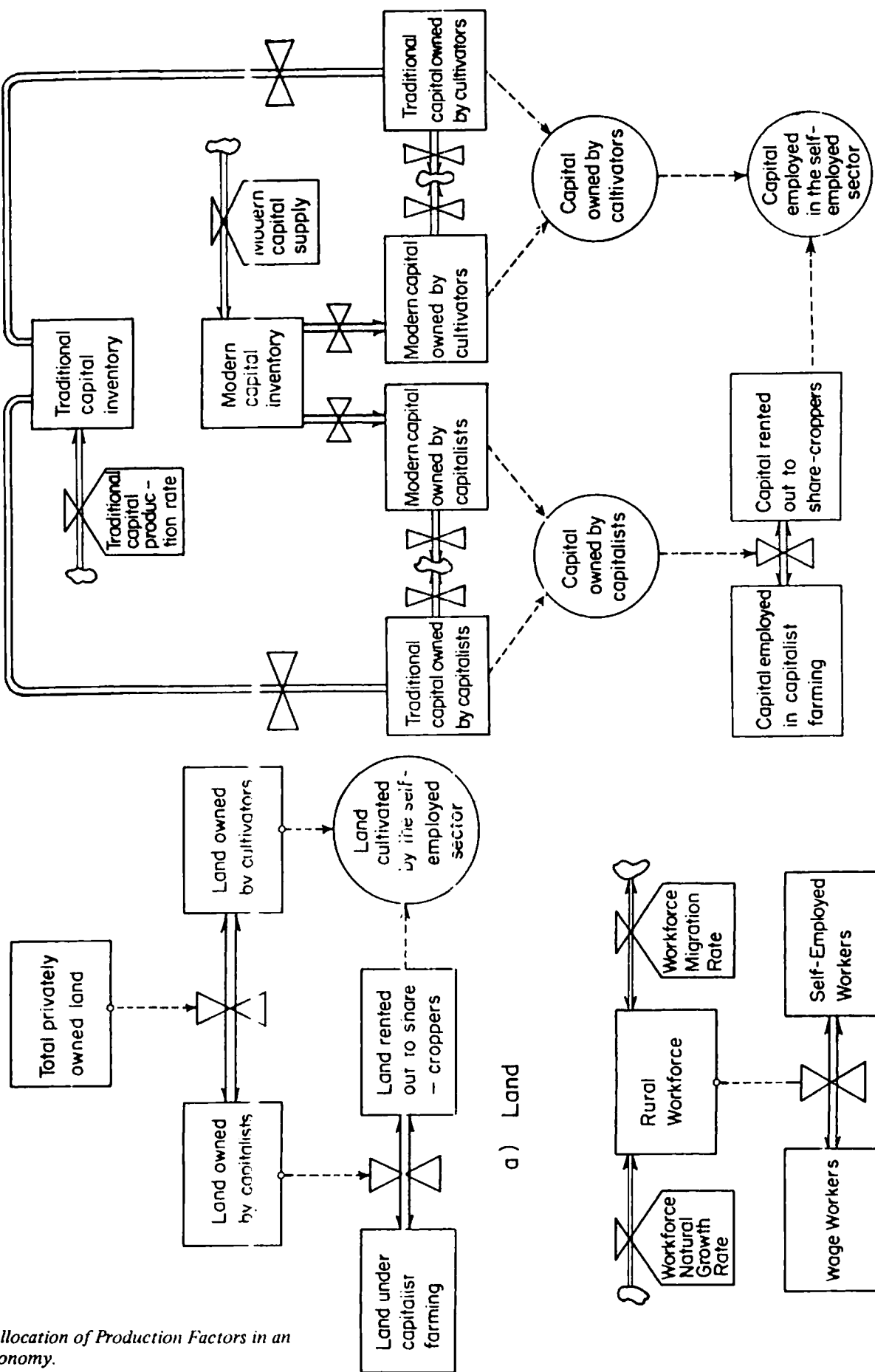


Figure 1: Allocation of Production Factors in an Agrarian Economy.

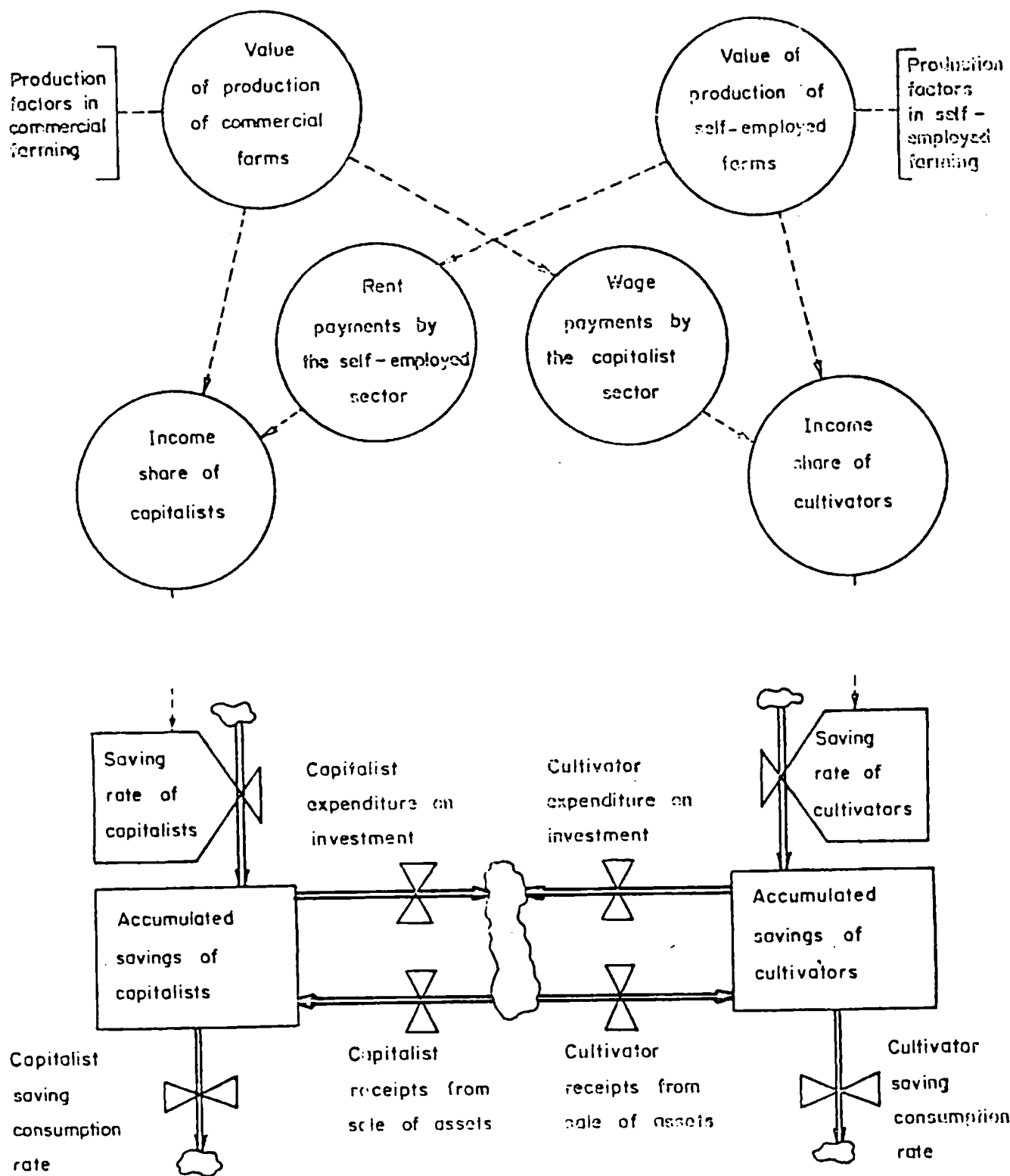


Figure 2: Disbursement of Income in an Agrarian Economy.

With these basic assumptions, the two sectors are organizationally similar except for the difference in their worker hiring behaviour stated in assumption 2. For initial conditions, all production factors are arbitrarily divided equally between the two sectors and the market is assumed to be in general equilibrium. This model is simulated under different socio-technical environments to obtain patterns of behaviour corresponding to the various wage and income distribution scenarios discussed in section 2.

4.1 The Neo-Classical Behaviour

The neo-classical behaviour manifests a tendency to restore a general equilibrium whenever this equilibrium is disturbed. The neo-classical theory requires that all production factors, including labor, be paid according to their respective marginal revenue products and that the financial markets be perfect. Since this theory is silent about ownership, production factors may either be assumed to be communally owned or uniformly distributed among the households. In either case, renting of the resources between the sectors is irrelevant and, hence, not permitted in the model. Also, since both sectors accrue incomes proportional to the resources they employ, their

saving habits should be similar. However, this assumption is not required in the presence of a perfect financial market assumption, although it assures that the equilibrium cash balances of the two sectors will be commensurate with their investment rates.

Figure 3 shows how the two sectors in the model proceed to restore equilibrium when it is distributed by exogenously transferring some of the workers from the capitalist sector to the self-employed sector. This transfer raises the marginal productivity of the remaining worker in the capitalist sector which immediately proceeds to increase its workforce. The transfer also raises the intensity of cultivation in the self-employed sector, as a result of which, the marginal productivities of land and capital in that sector rise. Hence this sector proceeds to acquire land and capital. These activities continue until the marginal revenue products of the two sectors and their proportions are the same in the two sectors.

Since ownership is either communal or uniformly distributed among the households, the income of a household will remain unchanged irrespective of the size of each sector. However, as pointed out earlier, a perfect market exists only in the

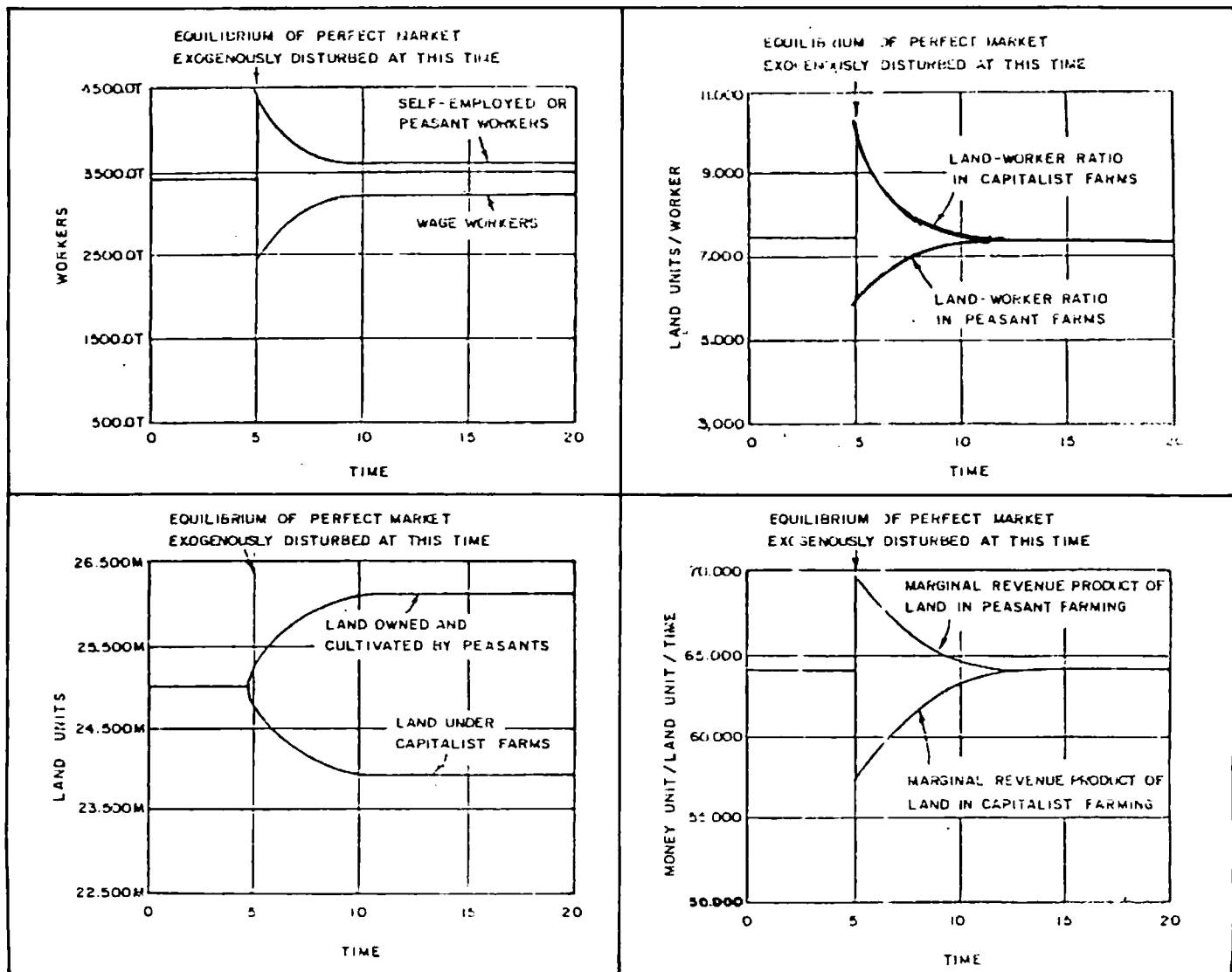


Figure 3: Recovery from Disequilibrium in a Neoclassical System.

metaphorical theory, not in the real world. But if the real world organization represented in the model is made to obey the hypothetical rules of the neo-classical theory, a behaviour similar to that which forms the basis of this theory is obtained.

4.2 Peasant Agriculture

Peasant-run agricultural systems have existed in many societies at various times in history¹⁷. A peasant agricultural system will appear if all production factors described in Figure 1 under the various categories of ownership and management are transferred to the ownership and management of the self-employed cultivators (peasants). This might occur if appropriate pressures exist in the system, albeit, the latent structure of ownership and management of Figure 1 continues to exist.

The model generates the phenomenon of peasant agriculture if compensation of the wage-workers is linked with the average consumption expenditure per worker (taking into account incomes of both wage-employed and self-employed workers) instead of with the marginal revenue product of workers. It should be noted here that at any time, the average consumption expenditure of a worker represents his opportunity cost for leaving his current mode of employment for accepting a new job, which is a good measure of the wage bargaining position of the workers¹⁸. Thus, the modified wage-determining structure of the model is closer to the real world wage-determining process as compared to a hypothetical relationship between wages and marginal revenue product of workers, which might appear as an outcome of wage bargaining under special circumstances, as will be shown later.

Figure 4 shows how a scenario of peasant agriculture may develop when average consumption per worker is substituted for the marginal revenue product of workers as a basis for wage determination in the model. Since this change disturbs the market equilibrium initially existing, it activates the model's internal tendency to seek a new equilibrium. Thus, no exogenous disequilibrating change is needed for generating the dynamic behaviour in this simulation and in those discussed in the following sub-sections.

The new wage rate is much higher than the MRP of the workers in the capitalist sector. Therefore, wage-workers are laid off, and accommodated in the self-employed sector. The availability of additional workers in the self-employed sector makes it possible to cultivate land more intensively. Thus, the MRP of land in the self-employed sector increases and its bids for land rise. On the other hand, the decrease in the workforce of the capitalist sector lowers its land cultivation intensity and hence its land productivity. Falling productivity increases the opportunity costs of investing in land, and the capitalist sector is forced to sell its holdings to the self-employed peasants.

If the self-employed sector increases its land and capital holdings, its production rises. When increases in production of this sector exceed the wage income lost due to decreasing wage disbursements from the capitalist sector, the net revenue of the peasants rises and the average consumption per worker is increased. The wage rate, therefore, is pushed further up, which necessitates further decreases in wage workers. The spiraling action of these processes allows gradual transfer of all resources to the self-employed sector.

The marginal revenue products of land and labor in the two sectors tend to equilibrate at different values, but the capitalist sector exists only in theory, because towards the end of the

simulation run almost all resources are owned and managed by the self-employed sector towards the end of the simulation run. Thus, all income accrues to the self-employed sector, although some portion of this income might be collected by the government as taxes. Since no part of the income is obtained by the capitalist households and the working households may own and manage resources according to the quantity of labor they can supply, the income distribution may appear to be truly egalitarian in a peasant economy.

4.3 Mixed Peasantry and Tenancy

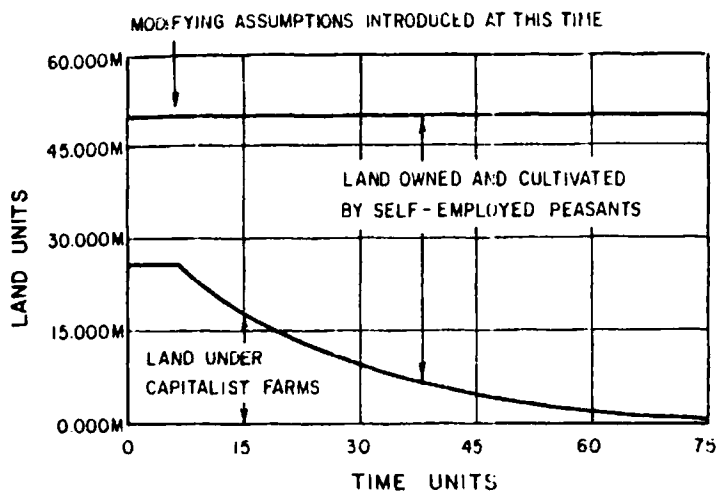
The purely peasant economy of section 4.2 may appear only when separation of resources from the tillers of land, through renting, is socially and legally ruled out. Such social and legal norms have been identified in many instances when a peasant system appears. In the absence of such norms, however, a landowner is not necessarily required to farm his land personally. Thus, renting and share-cropping arrangements may appear along with peasant agriculture when farming on capitalist lines is not a profitable practice. These arrangements allow the capitalist sector to own land without having to farm it¹⁹.

A scenario of mixed peasantry and tenancy shown in Figure 5 develops when the renting of land and capital is allowed in the model in addition to wage determination on the basis of average consumption expenditure of workers. Rents depend on the aggregate marginal revenue products of the respective factors. In the new equilibrium reached, capitalist farming and wage employment gradually disappear but a substantial part of the land, which is rented out to the share-cropping tenants, continues to be owned by the capitalist sector.

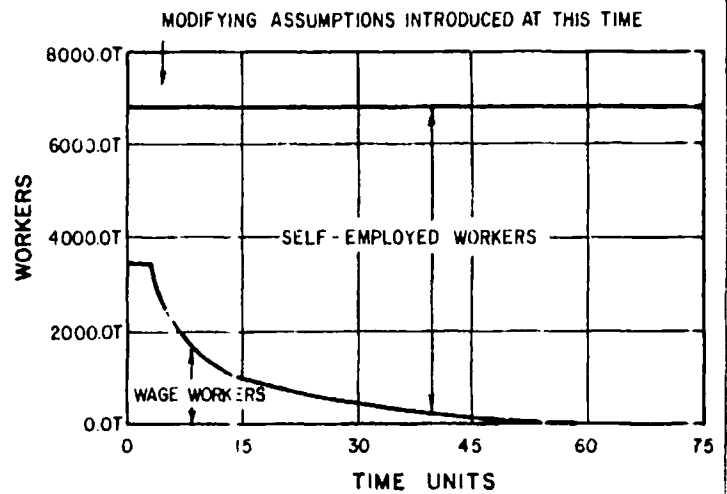
Such land and worker distribution develops due to the combined effect of the modified wage and tenure assumptions. When workers are laid off by the capitalist sector in response to high wage rates, the productivity of land cultivated in the capitalist sector falls. However, as the laid-off workers are accommodated in the peasant sector, its demand for land as well as its intensity of cultivation increase. Therefore, land rents are pushed up and the capitalist sector is able to get enough returns from renting land to justify its investment in land.

Again, the marginal revenue products of the production factors in capitalist farming and the shadow wage are only hypothetical, as that farming mode is not practiced any more towards the end of the simulation run. However, land renting allows the peasant sector to adjust its factor proportions quickly when it is faced with accommodation of a large number of workers. When the economy reaches an equilibrium, the marginal rates of return on factors in the peasant sector are the same as those at the beginning of the simulation. The shadow wage equilibrates at a level less than that for the exclusively peasant-run economy described in section 4.2, because a part of the income is now being obtained by the capitalist households, which depresses worker consumption.

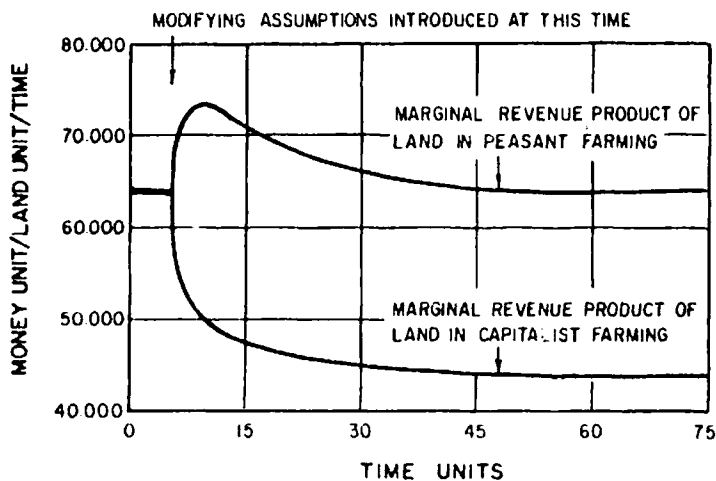
Note that total income remains unchanged as the scale of farming is assumed not to affect production. Also note that the end equilibrium distribution of income will depend on the initial distribution of factors when modifying assumptions are introduced, and on the transfers occurring over the course of the disequilibrium. Thus, the mixed peasantry and tenancy phenomenon may not represent any unique income distribution system.



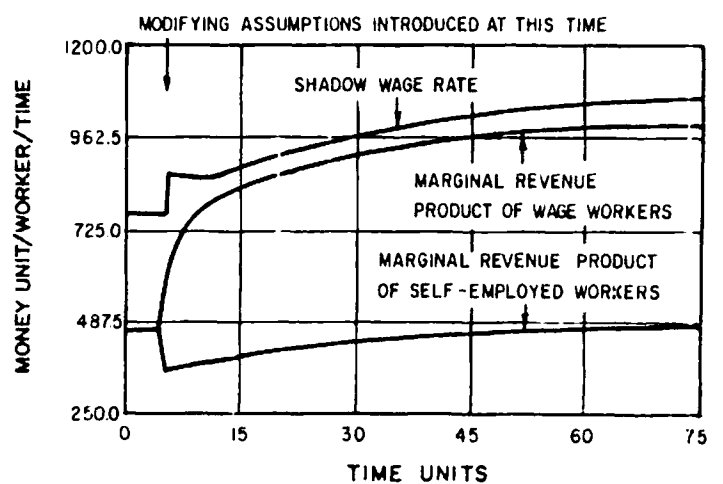
(a) Land Distribution



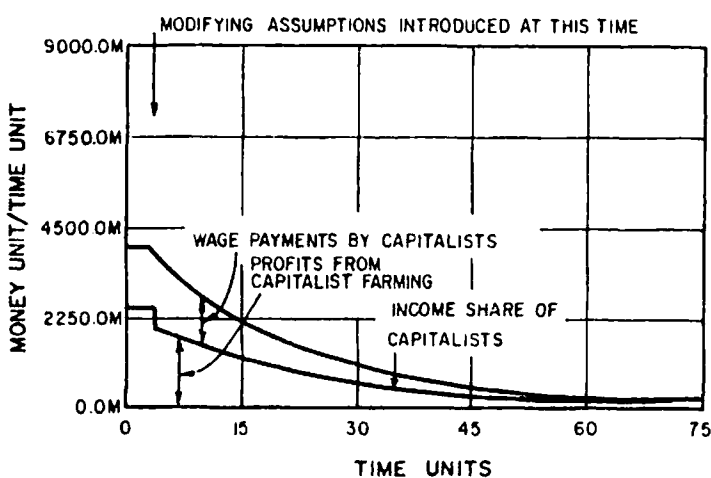
(b) Worker Distribution



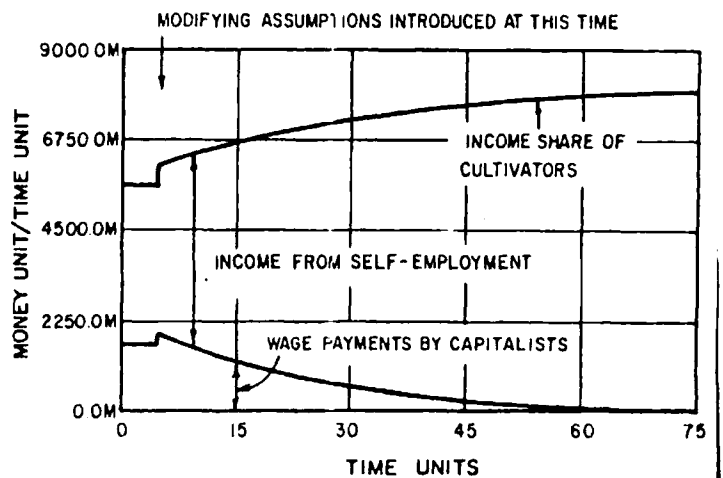
(c) MRP of Land



(d) MRP of Workers and Shadow Wage

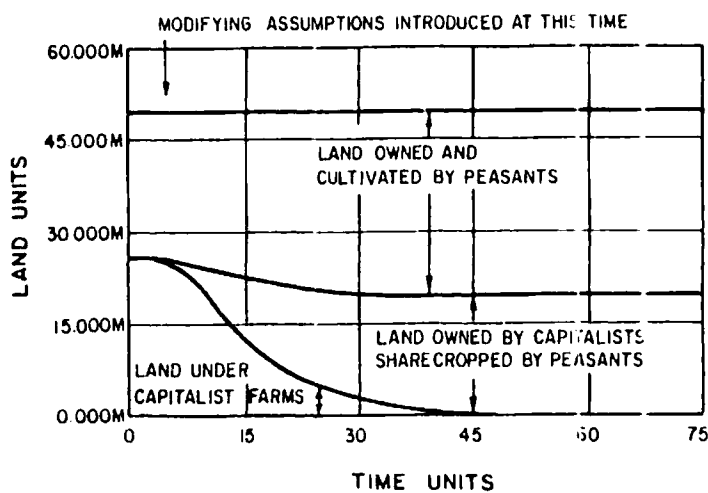


(e) Capitalist Income Share

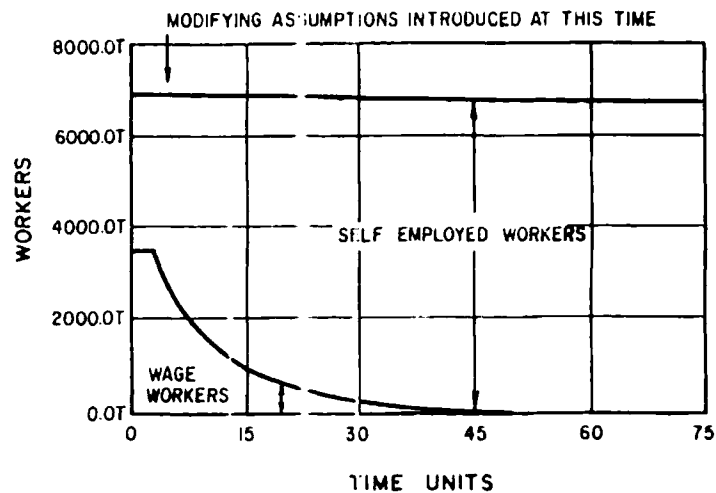


(f) Worker Income Share

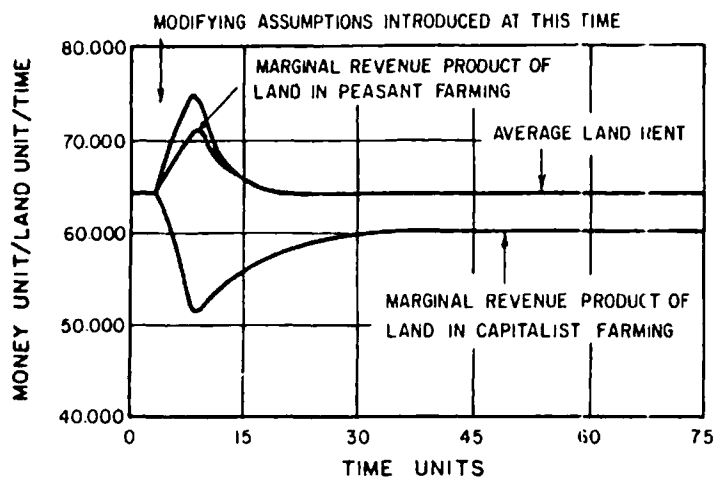
Figure 4: Development of a Peasant Run Economy.



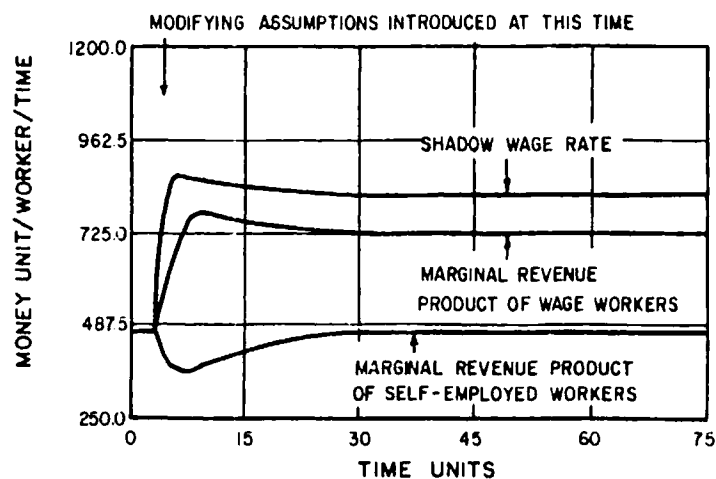
(a) Land Distribution



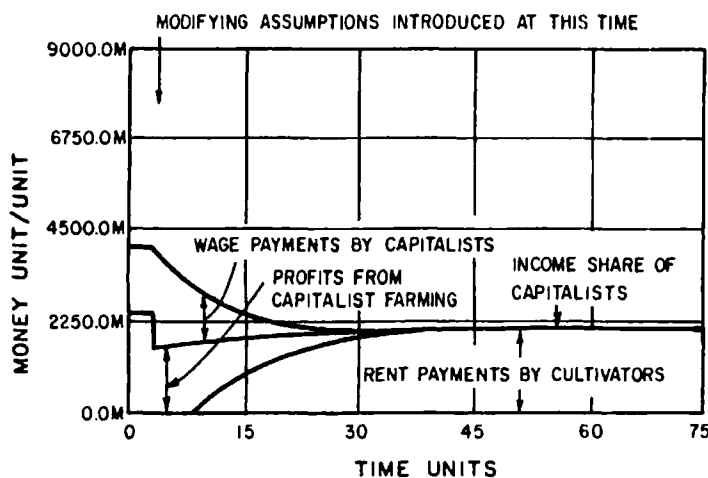
(b) Worker Distribution



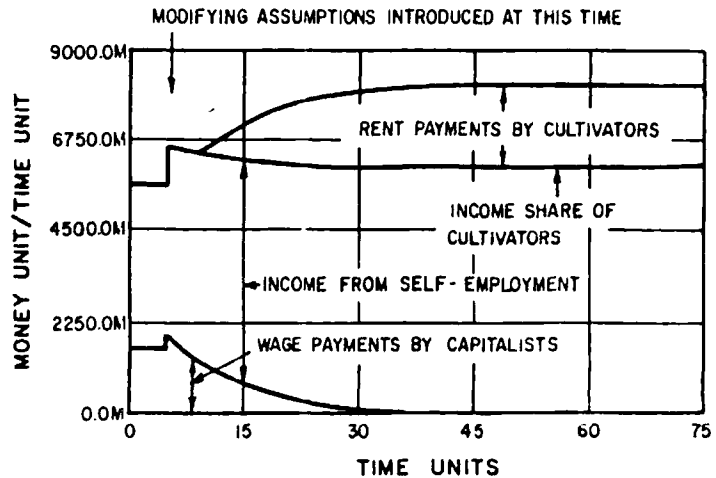
(c) MRP of Land



(d) MRP of Workers & Shadow Wage

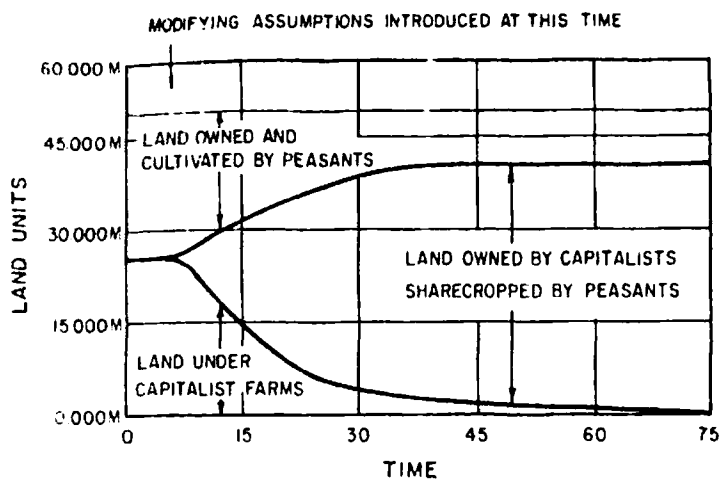


(e) Capitalist Income Share

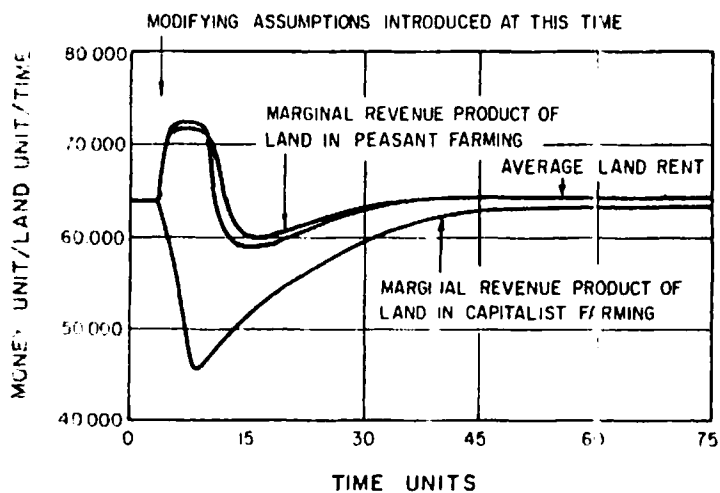
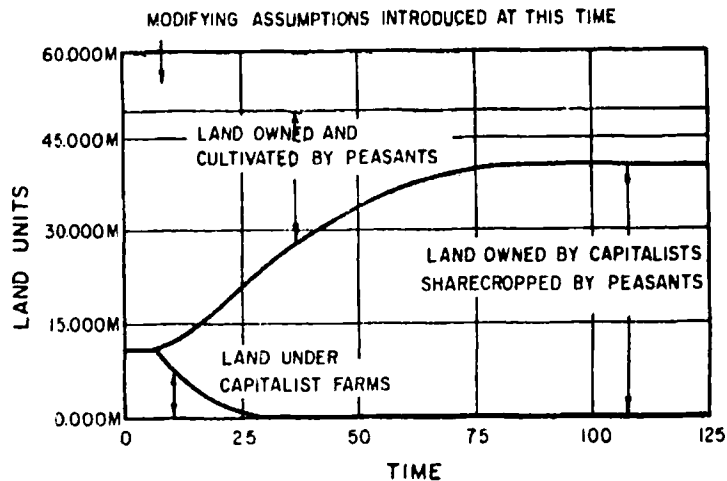


(f) Worker Income Share

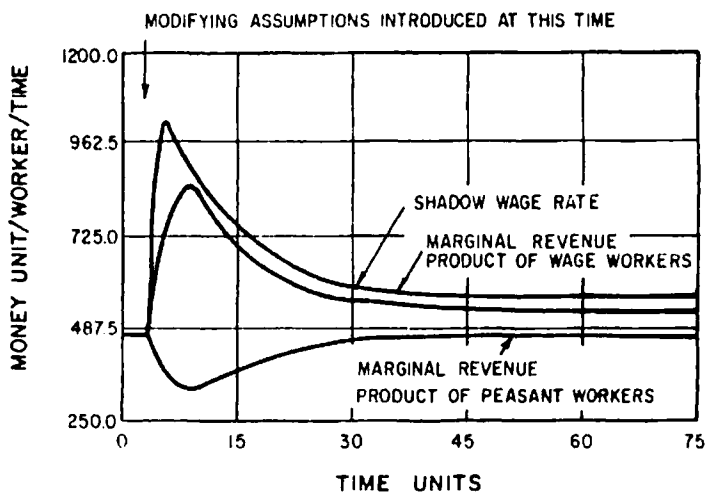
Figure 5: Development of Mixed Peasantry and Tenancy.



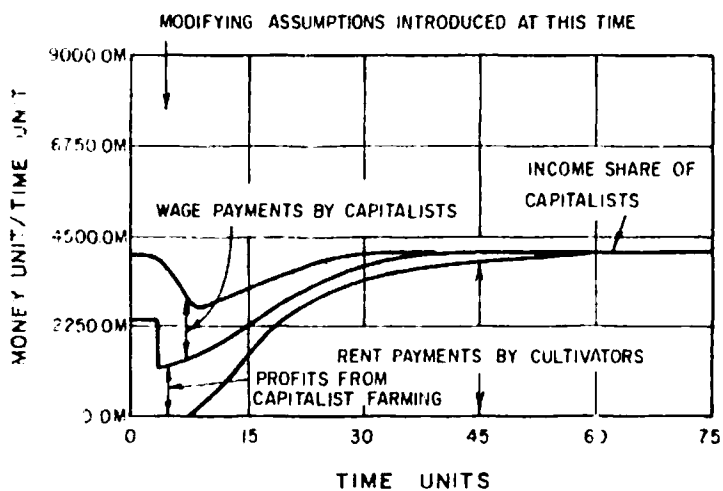
(a) Land Distribution, Various Initial Conditions



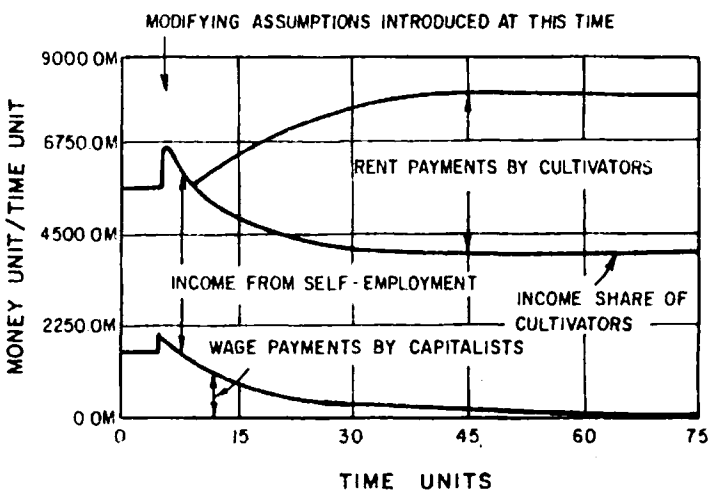
(b) MRP of Land



(c) MRP of Workers & Shadow Wage



(d) Capitalist Income Share



(e) Worker Income Share

4.4 Feudalism

While the mixed peasantry and share-cropping pattern obtained in section 4.3 incorporates the land-ownership and land-management categories in the agrarian economies of many developing countries, it says little about the amount of land in each category. In reality, such a pattern is often observed to exist beside a very unequal distribution of land between the worker and the capitalist households. Most working households are landless, whilst most land is owned by the absentee landlords. Other pervasive features of this pattern include low worker income, poor worker productivity, and the presence of a powerful and affluent land-owning "feudal" class. Hence the term feudalism²⁰.

A feudal land-ownership pattern develops in the model when its socio-technical environment is further modified to take into account the absence of the financial institutions, which confines the investing households to self-finance, and the differences in the saving abilities of the two sectors of the economy, which affect their investment abilities in the absence of the financial institutions.

Some models of the developing country financial markets assume that all economic units (called firm-households) are confined to self-finance and that these units do not borrow from, or lend to, one another. Thus, the desired rates of investment are highly dependent upon the availability of cash balances within the economic units²¹. While such models portray some of the characteristics of the rural financial markets, their definition of an economic unit is rather narrow. In fact, substantial informal lending and borrowing facilities are available to the peasant sector while bigger landlords have access to one another and to the limited institutional credit sources²². In view of the possibility of mobilizing savings within each sector at the same time as there are restrictions on the transfer of savings between the sectors, the developing country financial markets would appear to be segmented by sectors rather than fragmented into households.

There is also ample empirical evidence for believing that the capitalist sector has a higher propensity to save than the peasant sector, possibly, because the income of a capitalist household is much above subsistence level²³. Furthermore, while the saving propensity of a capitalist household may be quite stable, that of a peasant household may vary widely due to its tendency to maximize consumption and its inability to adjust its consumption in accordance with its income²⁴.

The following changes are made in the model, in addition to those introduced so far, in order to represent accurately the financial arrangements of the rural socio-technical environment:

1. The investment ability of each sector is linked with the portion of its saved cash balance which is available after having met its past cash needs, both for deferred consumption and for investment.
2. The saving rate of the peasant sector is linked with its utility to save for investment for self-employment. This utility declines when wage-employment opportunities offering compensation comparable to that in self-employment are available, and vice versa.

3. The saving ability of the peasant sector is also linked with this sector's rent burden. The rent burden depresses the absolute level of income of the peasant households, which limits their savings as their consumption cannot change proportionately to their income.

Since these factors are strongly interlinked, the implications of each are not discussed here separately, although these are given in Saeed: 1980. Together, these factors describe the financial market conditions which are common to many developing countries²⁵.

Figure 6 shows how a feudalist scenario develops when the above characteristics of the financial market are incorporated into the model in addition to the wage and tenure assumptions of section 4.3. Although the ownership and management categories of land that develop are similar to those in mixed peasantry and tenancy towards the end of the simulation, the capitalist sector emerges as the major landowner, irrespective of the initial distribution of land. With such a distribution of land-ownership, it is quite natural that the capitalist households will emerge as a feudal class.

Such a scenario develops because of an internal goal of the system to employ resources in the most efficient way while the ownership of these resources can only be in the hands of the sector having the best financial ability. If land can potentially be farmed by owner-cultivators, share-croppers, and wage-workers, irrespective of the size of each type of farm, the presence of wage-employment will depress savings of the peasant sector. However, this will also decrease its ability to own land. Thus, if wage-employment opportunities decline, the surplus labor absorbed in self-employment will increase the demand for rented land and bid rents up. This not only makes it profitable for the capitalist sector to invest in land for renting out, it also gives a financial advantage to this sector over the peasant sector whose savings continue to decline as its rent burden rises. Thus, even though capitalist farming is eliminated due to the high cost of wage-labor, land ownership of the capitalist sector expands.

Note that the equilibrium shadow wage in this case is lower than in mixed peasantry and tenancy. This occurs because of a higher rent burden of the peasant sector which decreases

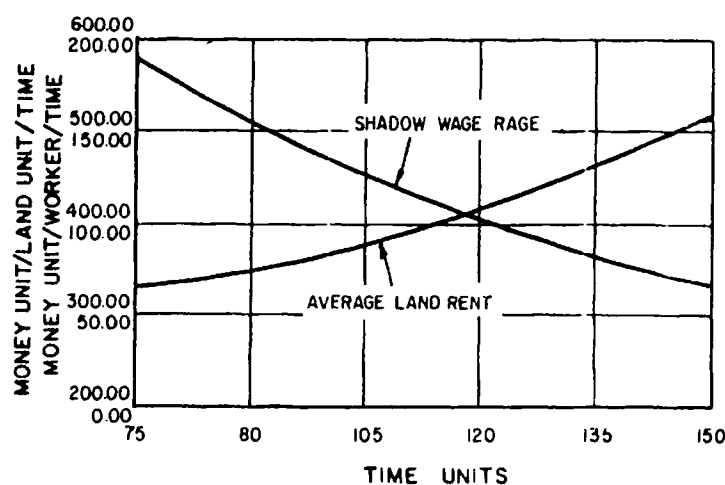
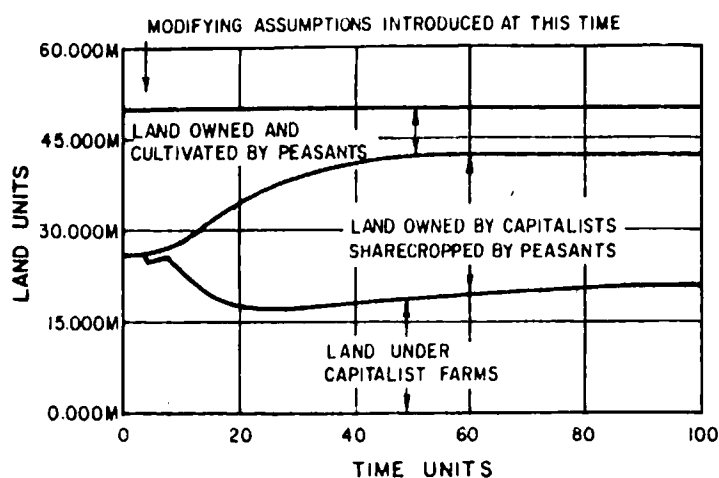
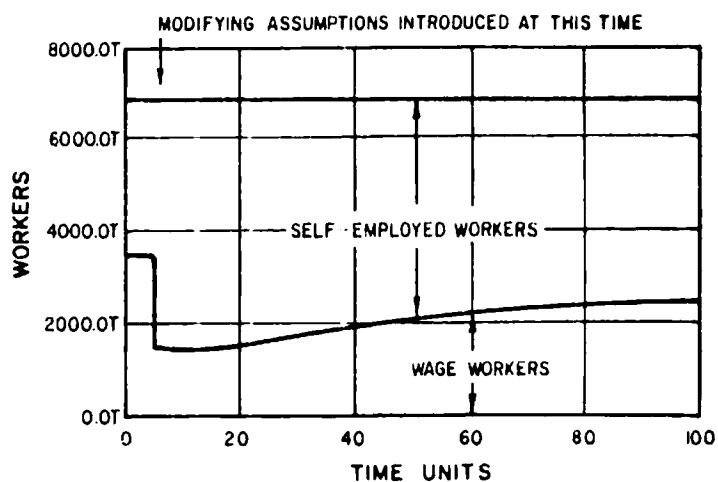


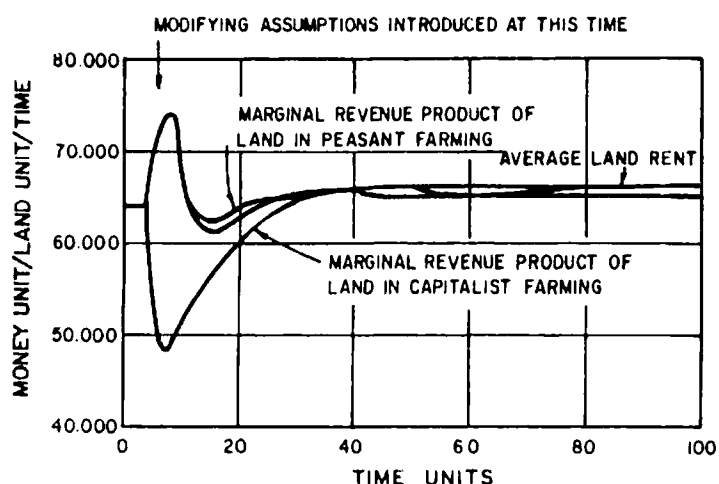
Figure 7: Changes in Shadow Wage & Land Rent due to Population Growth in a Feudalist Economy.



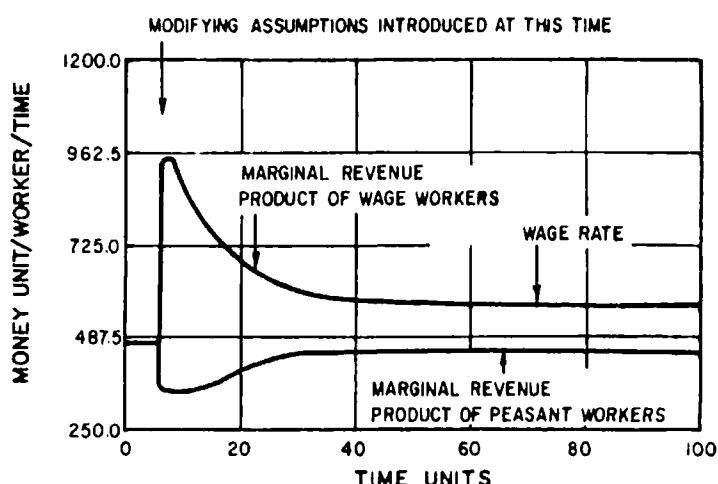
(a) Land Distribution



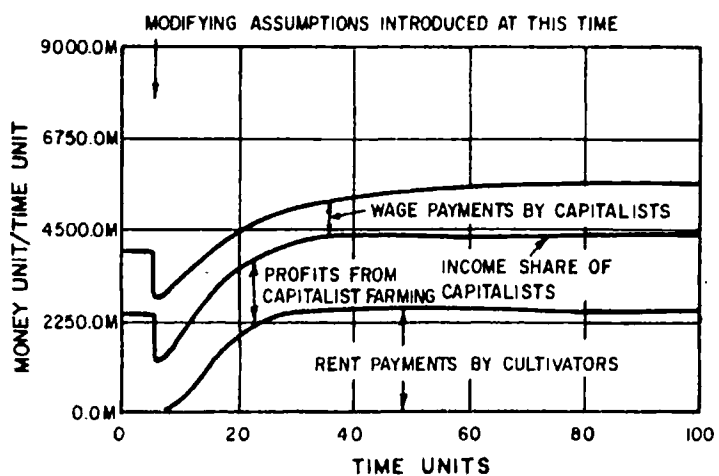
(b) Worker Distribution



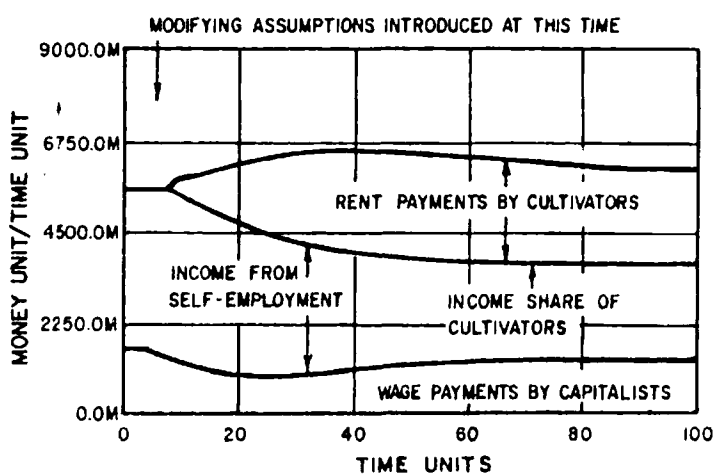
(c) MRP of Land



(d) MRP of Workers & Wage Rate



(e) Capitalist Income Share



(f) Worker Income Share

Figure 8: Development of a Dualist Economy.

its income share and, hence, the average consumption per worker. Also, as in section 4.3, the marginal revenue products of factors in the capitalist sector are only hypothetical as all production is carried out by the self-employed workers.

Population growth in such an economy worsens income distribution even though the accompanying increase in workforce raises the intensity of cultivation and total output. Figure 7 shows the behaviour of the shadow wage and land rent when population was allowed to grow at a constant rate in the model. The population growth mechanisms were introduced after the end of the scenario in Figure 6 had been reached. As increased intensity of cultivation increases productivities of land and capital, rents are bid up. Consequently, the capitalist share of the total rural income absorbs a substantial part of the increase in output. Thus, the increase in the worker share is not proportional to the increase in their number, which depresses their average consumption and the shadow wage determined on the basis of their wage bargaining position. Indeed, a significant observation in many developing country rural areas is the worsening financial condition of the cultivators and their increasing indebtedness to land-owners even though the aggregate agricultural production has been rising²⁶.

4.5 Dualism

The mixed peasantry and tenancy patterns of agriculture, often incorporating a feudal class, have given rise over the past few decades to what is known as dual economies in many developing countries as discussed in section 2. It can be easily shown that the rural social organization underlying the wage and income distribution phenomena discussed so far will also generate the dualist behaviour if a capital differentiation is created between the capitalist and worker-managed farms. Such a capital differentiation may appear because of a limited supply of modern labor-efficient capital inputs which can be applied to large-scale peasant farming but not to small-scale peasant farming.

The dualist scenario shown in Figure 8 develops when an exogenous supply of modern capital is made available to the capitalist sector at the same time as the modifying assumptions of section 4.4 are introduced. The output elasticity of modern capital is assumed to be higher than that of traditional capital while the use of the former is also assumed to permit an increase in the frequency of cropping. The output elasticity of land is assumed to be the same when using either type of capital. The elasticity of output of workers is assumed to decrease when modern capital is used. The assumption of uniform returns to scale is maintained. These assumptions serve to represent the high productivity and labor-displacing characteristics of modern capital²⁷.

Capital differentiation between the two sectors develops as the capitalist sector starts meeting its additional and replacement capital needs by acquiring a mixture of modern and traditional capital inputs. Capital demand is met by modern capital as much as the fixed supply permits. The balance of the demand is met by acquiring traditional capital.

At the beginning of the simulation, there is no capital differentiation between the sectors. Thus, as wage determination assumptions become active, the capital sector lays off workers while simultaneously transferring land into renting activity. As the proportion of modern capital in the capitalist sector rises, the productivity in the sector increases, which

makes it profitable to transfer land back into production activity and hire workers back at the going wage rate. The increased productivity and income derived from this make it both economically and financially viable for the capitalist sector to increase its bids for land. Thus, the capitalist sector's share of land rises faster and reaches equilibrium at a higher level than in the case of the feudal system.

As the output elasticity of workers falls with the increase in the fraction of modern capital, the marginal revenue product of workers in the capitalist sector may not rise much with the increase in its output. Therefore, while the capitalist sector acquires additional land from the peasants, it does not hire a proportionate number of workers. When workers expelled by the capitalist sector join the self-employed, the demand for rented land is increased and land rents are bid up. Thus it again becomes profitable for the capitalist sector to allocate land to renting activity. Eventually, the economy reaches equilibrium in which the marginal productivities of land in the two sectors are the same. Any further conversion of share-cropped land to commercial farms would decrease aggregate returns on land. Thus, peasant farming, capitalist farming and tenant farming activities come to exist side by side.

The wage rate reaches equilibrium at a lower level, and the land rent at a higher level, than in the case of feudalism. Higher land rents are made possible due to the increase in aggregate productivity of land through the employment of modern capital in the capitalist sector and the increase in the number of workers per unit of land in the peasant sector. Indeed, the marginal revenue product of workers in the peasant sector is lower than in section 4.4.

The capitalist share of income has further risen, whereas, the share of the peasant sector has decreased. The ensuing decline in the average consumption of workers lowers the wage rate demanded by the workers, as displayed. Thus, while the peasant sector now also receives direct wage payments, they are inadequate to compensate for the income previously available from self-employment. The new revenue of the capitalist sector is highly due to an increase in its ownership of land, an increase in its productivity, and a decrease in its labor costs.

Capital differentiation between the capitalist and peasant sectors makes it expedient for the two sectors to employ factors in different proportions as is shown in Figure 9. Such differences of technology between the two sectors are quite common in a number of developing countries²⁸.

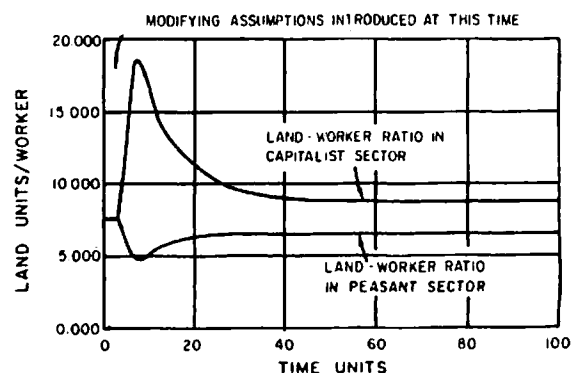


Figure 9: Land Worker Ratios in the Two Sectors of a Dualist Economy.

5. CONCLUSION

The paper demonstrates how a unique organizational structure for allocation of production factors and disbursement of income can create different wage and income scenarios which are postulated in the various models of the rural social system of the developing countries. The different scenarios arise when the rural social organization performs under various conditions of its socio-technical environment. These conditions determine the rules of ownership, the wage, the land tenure, the characteristics of the financial markets, and the technological conditions prevailing. The characteristics of the socio-technical environment appear to impart to the system an internal tendency to arrive at specific wage and income distribution patterns.

The presence of such an internal tendency in social organizations points towards the importance of the organizational factors for designing public policies. These policies may easily be defeated if they are not directed to the organizational mechanisms responsible for generating an undesirable pattern²⁹. For example, it has been shown that the provision of technologies that create capital differentiation

adversely affects income distribution. However, if technologies are introduced that minimize capital differentiation between the capitalist and self-employed sectors, no change may be expected in the existing wage and income distribution pattern because capital differentiation did not exist when these patterns were generated. Similarly, without a change in the distribution of the productive resources, the provision of financial institutions may have little impact on worker compensation and income distribution. However, if the sources of the internal tendency of the system are not influenced, even radical policies for redistributing ownership of resources may be defeated.

Thus, it follows that development policy should endeavor to influence the roles of the actors in the social organization it aims to affect instead of attempting to alleviate symptoms that surface in the form of low wage rates, unequal income distribution, capital shortage, or capital differentiation. Some explorations into public policy design using an organizational framework are made in Saeed: 1982³⁰. A lot more work is needed in this area.

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