

2. Zajednička komponenta izgradnje puteva je komponenta za koju je pozitivno zainteresovano nekoliko klasa korisnika. Ovo je opšti kriterij klasifikacije koji ima vrlo različite implikacije u stvarnoj prameni (što je pokazano na nekoliko primera).

3. Doprinosi pojedinih klasa korisnika treba da budu u skladu sa elasticitetima njihovih tražnji za zajedničku komponentu kao i sa specifičnim troškovima koje one nameću.

4. Iako tražnja automobila može biti dovoljno neelastična da može snositi ukupne troškove puta, to od nje ne treba zahtevati s obzirom da se mnogi delovi puta troše različito kad ih koriste vozila različitih veličina ili pak imaju datu specifikaciju samo zbog toga što kamioni to zahtevaju.

5. Ono što je rečeno o ceni može da se primeni i na godišnje troškove za program puteva, tj. za onaj deo programa koji se stara o poboljšanju mreže u naseljenim oblastima. (Ovo se verovatno odnosi na veći deo programa).

6. Pomoć sa strane u izvođenju programa puteva može biti opravdana kad je diskriminacija neefikasna tj. kad bi diskriminacija značila gubljenje profita zbog neostvarenog saobraćaja. Ova pomoć će svakako biti efikasnija ako je pružaju lokalne vlasti nego ako se ostvaruje putem transfera sa centraliziranih sektora ili regiona, zbog toga što u ovom drugom slučaju nedostaci metoda ocenjivanja projekta dolaze do većeg izražaja.

U tabelama 1—4 dati su osnovni podaci koji se mogu koristiti pri ocenjivanju obaveznog nameta korisnicima. Oslanjamo se na podatke dobivene iz zvaničnih statistika o voznom parku i godišnjoj kilometraži kao i na podatke o oštećenju puteva i o odnosu habanja i tereta za Sjedinjene Američke Države.

Tabela 5 upoređuje obavezne namete korisnicima sa doprinosima korisnika. U koloni 5 su dati doprinosi korisnika dok je obavezan namet obračunat u koloni 3. Nameti se sastoje od komponente oštećenja AASHO i komponente koja je u vezi sa tražnjom a zasniva se na prosečnoj uštedi do koje se dolazi izgradnjom novog puta. Doprinosi najvećih kamiona i dizel kamiona od po deset tona su nešto ispod očekivanih. Prividni paradoks niže varijabilne cene za kamione od deset tona dolazi usled toga što veliki kamioni sa dvostrukom osovinom opterećuju puteve relativno manje po toni bruto težine nego kamioni od deset tona sa jednom osovinom.

AN ECONOMIC ANALYSIS OF PERU'S SOCIAL PROPERTY LEGISLATION

Roberto ABUSADA-SALAH*

I. INTRODUCTION

Since its arrival to power on October 3, 1968 the government of Peru has been implementing a series of reforms aimed at the transformation of the productive structure. On May 2, 1974 the «Social Property Law» was issued to define a new sector within the economy, composed of worker managed firms which according to the government represents the most important step towards the goal of building a social democracy of full participation. Thus it has been repeatedly stated that this new form of economic organization will be predominant within the context of a pluralistic society. Other participatory schemes have already been implemented. The introduction of labour communities (*comunidades laborales*, CL) in private firms in 1970 was designed to give workers control of 50 percent of the firm's outstanding stock which is gradually acquired by the *comunidad laboral* with deductions made from the firm's pre-tax income. In the case of the manufacturing sector 15 percent is deducted each year and used to buy new or existing shares. Once the 50 percent is reached, the CL issues its own securities and distributes them to its members (all full-time workers) in proportion to the time worked in the firm. The CL is represented initially on the board of directors by one member and thereafter in proportion to the shares owned. Small private firms (5 or less workers) are not required to have a *comunidad laboral*. In addition, the process of agrarian reform spawned two type of collective agricultural enterprises. In the coastal region, the large and highly productive plantations were given to its workers organized in Agrarian Production Cooperatives (*Cooperatives Agrarias de Produccion*, CAP). The land and equipment received by the CAP from the State must be paid for out of each year's surpluses. In the Andean highlands the expropriated latifundia were converted into cooperatives. The cooperative, in turn, is integrated into a larger organization called

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Agricultural Society of Social Interest (*Sociedad Agrícola de Interés Social*, SAIS) which consists of one or more latifundia and its surrounding peasant communities which receive income from the cooperative and participate in its management.

In spite of their widespread presence these participatory schemes do not comprise more than 12 percent of the economically active population of the country. And, furthermore, the extent of participation within these organizations is uncertain. In the case of the *comunidad laboral* participation in the firm's management is a function, among other things, of the percentage of shares owned by the CL and this percentage has, on the average, reached less than 10 percent after four years.

In contrast, the degree of internal democracy that the Social Property Law allows for the new firms of the new sectors is certainly great. All workers will be voting members on the firm's General Assembly which is the highest organ within the enterprise. It elects (and removes) the *Directing Committee* (Comite Directivo) the highest executive body, and the management. A number of specific duties dealing with training, advisory, hiring, discipline, etc. are carried out by special committees whose members are elected for terms varying from one to three years.

This paper will analyze the economic implications of the Social Property Law vis-a-vis the objectives for which it has been created. The Law raises countless important issues that fall clearly outside the realm of economy analysis. This paper will be concerned only with very few questions which I consider to be of particular importance from the economic point of view.

In a poor society the building of »self-management« appears as a colossal task. Workers that have access to modern means of production will automatically be counted among the wealthiest numbers of society because their incomes however low will be vastly superior to average income in the bottom three quartiles of the income's pyramid. Workers in the Social Property Sector will receive capital which is extremely scarce in society and therefore will be asked to accumulate at rates that are likely to be inconsistent with their group preference. Thus if society is to reach its development goals through the worker-managed alternative it will have to impose high explicit or implicit rates of taxation. This can, of course, be done with the backing of strong moral arguments but it is also true that the workers will have to decide freely whether or not to accept such a burden if the system is to maintain its self-managed characteristics. Policy makers will have to walk the narrow path that exists between rigid controls leading to a command system and indicative planning that may result in group egoism.

Section II presents a brief description of the institutional setting and discusses some of the most important financial mechanisms established under the provisions of the Law. In section III an effort is made to derive a behavioural rule for the Peruvian labor-managed firm. Section IV is concerned with some aspects that have a bearing

on distribution and growth in the economy; on emphasis being placed on the conditions that are necessary for the new sector to promote accumulation and a better distribution of income. Finally section V examines the issue of predominance in order to determine its likelihood at different points in time.

II. INSTITUTIONS AND FINANCIAL MECHANISMS

A Social Property Firm (*Empresa de Propiedad Social*, EPS) which is composed exclusively of workers can emerge at the initiative of any individual group or governmental agency. Projects for these firms have to be submitted to the National Social Property Commission (*Comision Nacional de Propiedad Social*, CNPS); if approved they are sent to the National Social Property Fund (*Fondo Nacional de Propiedad Social*, FNPS) or COFIDE (a State Development Bank) for financing. In order for the project to be approved it will have to include detailed information about the wage scale, efficiency and productivity premia, dependent allowances and the like.

Once the firm is constituted it receives an *aporte transitorio* which is an initial loan given by COFIDE or the FNPS. Additional funds may be obtained through the issuance of redeemable variable income securities, called *accio-bonos*, that can be bought only by financial intermediaries and have no management or control rights attached to them. In turn, the financial intermediaries will constitute portfolios made of *accio-bonos* and government bonds and will issue »certificates of participation« which will be sold to the public. Thus the »certificates of participation« will have a minimum yield, reflecting the fixed interest on government bonds, and a variable component that depends on the performance of the firms, represented in the particular portfolio. The CNPS will determine the maximum percentage of *accio-bonos* of the same firm on each portfolio as well as the maximum percentage that a financial intermediary's portfolios can have representing any given industry. However, the law does not specify the percentage of *accio-bonos* that each portfolio can have. The above mentioned minimum yield on the »certificates of participation« clearly depends on the mixture within each portfolio. This mixture will automatically be changing because of new *accio-bonos* that have to be issued and handed over without cost to the holders of »old« *accio-bonos* free of charge every time a given firm reevaluates its assets, i.e. every time the price changes. This fact may bring about a modification of the yield on the »certificates of participation« by a series of counteracting forces. On the one hand, the yield of the »certificates of participation« may become, in part, inflation-corrected¹⁾ or else the mixture of the portfolio may be tilted towards more and more *accio-bonos* and unless financial intermediaries are able to buy more government bonds, the floor yield on the certificates of participation tends to disappear. Whether this bias, due to revaluation of assets by the

¹⁾ This is obviously true only if *accio-bonos* render a non-zero yield.

firm enriches or impoverishes the mixture will depend, at any given point in time on whether the dividend that *accio-bonos* pay is below or above the fixed yield on government bonds. Of course the revaluation itself might have an impact on the dividend that *accio-bonos* pay.

The payment of the *initial loan* (*aporte-transitorio*) is done according to an agreement signed between the firm and COFIDE or the FNPS. The loan is reimbursed out of the cash flow of the firm according to a schedule based on the projection of said cash flow. The agreement may include a clause calling for an interest payment which is intended to be manipulated to favor decentralization and to siphon-out location and monopoly rents. Once the initial loan is paid, the firm is required to continue to deduct every year amounts similar to those required for the payment of the loan and the interest. Provided there is an approved reinvestment plan the funds that the firm deducts in any given year after the initial loan is paid can be used to buy fixed assets. If the funds are not applicable during the given year, the firm has to buy «immediately convertible bonds» (BCI), for which the law does not specify any interest. Reinvestment is supposed to be

Table 1.

LAW DEFINITION OF SURPLUSES

1. = Total Revenue
2. minus Total Cost (including the wage bill)
3. = EXPLOITATION SURPLUS
4. plus/minus Capital Gains and other Financial Adjustments
5. = ECONOMIC SURPLUS
6. minus Accumulated Losses
7. minus Transfer Payment to the FNPS (0.1 (5 + 'W') — 2MWB²)
8. minus Reinvestment
9. minus Revaluation Surplus
10. minus Donations
11. minus All Other Deductions Allowed by Tax Laws
12. minus Amortization of Initial Loan (or Equivalent Payments³)
13. minus Deduction for Housing Fund⁴)
14. = TAXABLE SURPLUS
15. minus Taxes
16. plus (12)
17. = DISTRIBUTABLE SURPLUS

Accio-Bono Dividends

Workers' Rents and/or
Common Services.

¹) Wage Bill.

²) Twice the Lima legal Minimum Wage times the number of workers.

³) Refers to deductions made after the initial loan has been repaid.

⁴) A percentage of the economic surplus after deducting that part of accumulated losses which is covered during the year. The percentage will be set every year by the CNPS.

made out of current economic surplus (before taxes). If during a given year fixed assets have to be bought the firm can use whatever BCI it holds, on condition that the year's economic surplus will be used to repurchase the BCI used. If the year's surplus is not sufficient to replace all the BCI the firm is not required to buy the remainder in the following year. Since payments of initial loan are made out of the cash account of the firm each repayment creates a collective debt to the enterprise on the part of the workers; and increases the amount that each particular worker is to pay upon withdrawal from the firm. To allow for these payments 5 percent of each year's economic surplus is kept in a reserve fund. The aforementioned agreement between the FNPS or COFIDE and the firm also requires the latter to deposit in the FNPS any cash surplus over a limit imposed on the particular firm on a case by case basis. For income tax purposes, all reimbursements of initial loan to the FNPS and/or COFIDE and all reinvestment are deducted as cost from the economic surplus. Table 1 represents the various surpluses as defined by the Social Property Law. As can be observed, there exists a first instance taxation provision (item 7) whereby the firm has to transfer to the FNPS 10 percent of its economic surplus adjusted by the difference between the wage bill and twice the minimum regional wage times the number of workers. The meaning of this correction is not clear. All commentators of the law interpreted it as being a discouragement on higher wages since, it was argued, «excess wages» would be taxed. This is clearly wrong because the tax base is constant and wage bill is included in the definition of the economic surplus.²) The tax revenue is substantial and makes it possible for FNPS to constantly fund new firms. The income tax rate for the firms in the Social Property Sector is not specified in the law apart from the comment that it has to be comparable to the tax rate imposed upon the private sector firms. It is unclear what sort of criteria should be applied in order to provide for it.

Under the provisions of the law, the part of distributable surplus, as defined in Table 1, will serve for payment of dividends to holders of *accio-bonos*; the rest will be (a) distributed as bonuses among all workers and/or (b) used to finance common services. The bonuses will depend exclusively on the actual work in the firm in the particular year.

III. THE BEHAVIOUR OF SOCIAL PROPERTY FIRMS

At the moment there are no social property firms in operation in Peru. The efforts to describe their behaviour fall, partly at least, in the realm of futurology. However, the Social Property legislation esta-

²) Economic Surplus (S) = Total Revenue TR — Total Input Costs (I) — Wage Bill (W).
The Base (B) for the 10 per cent transfer is: S + Excess Wages (W-2MWB). Thus B = TR — I — 2MWB

⁴ Ekonomiska analiza

blishes in detail the operative guidelines of these firms as well as their relationship with the social property institutions.

The principle that the firms will be worker-managed stems from the law and the extent to which this principle is pursued depends most certainly on the constraints imposed on the firms by the regulatory agencies. Consequently the issue acquires paramount importance. If the regulations leave the firm completely free in an environment characterized by profound market imperfections, allocational inefficiencies will arise, the goals of growth and employment will not be achieved and group egoism might turn worker-managed enterprises into traditional capitalist firms. On the other hand, if the regulations are such as to leave the firm with no degrees of freedom the character of self-management would be hopelessly damaged.

The new social property firms in Peru are, by design, going to be operating within a market economy responding to price signals and guided by some behavioural maximizing criterion or set of criteria. In a labor-managed firm the remunerations policy will most certainly be one of the main elements of maximizing criteria. Under the provisions of the law, there are three ways in which a worker can derive income from the enterprise: a) the basic wage and wage premia; b) the »workers' rent«; and c) the access to »common services«. While the first is treated as a cost of the firm, the last two are part of the distributable surplus. The distribution between (b) and (c) is voted by the firm's General Assembly. The essential characteristic of (b), as mentioned before, lies in its being distributed among the workers only as a function of actual time worked whereas (a) has, presumably at least, a lower bound placed by market supplies of skilled workers and/or the country's minimum wage legislation. Therefore any shifts of income from (a) to (b) will improve the intra-firm distribution of income as well as the global distribution since (b) represents income after payment of the firms' taxes.

A behavioural rule would thus maximize alternatively (a) through maximizing average income per worker, or (b) through maximization of distributable surplus (and consequently taxable surplus). One further criterion would be to maximize employment but this would depend basically on the extent to which social considerations are taken into account by the working community. 3) Decisions on the choice of alternative are however not conflict-free. Not all workers will be in favor of wage increases. Those with lower salaries will rather derive income in the form of »workers' rent« since their share will be greater than that which would be received if all workers got a proportional salary raise. It should be noted, however, that the distributable surplus does not decrease by the amount of the increase in the wage bill incurred by the income tax the firm has to pay. Furthermore, any positive distributable surplus has to be shared with the owners of *accio-bonos* relative to their contribution to the firm's capital. This fact will bias any vote on wages against the »workers' rent« alter-

³⁾ Unless employment is expanded by hiring numbers of the immediate family of the employed.

native. 4) A further psychological bias is incurred by the fact that wage increases have the characteristics of an acquired right that is unlikely to be modified whereas the »worker's rent« can be considered at least by some workers, as a sort of windfall income that will not necessarily repeat itself.

So far, in our quest for what would be the behavioural rule of social property firms we have been implicitly assuming that the workers have in fact control over their salaries, which is not rigorously true since, under the law, a number of controls over salaries will be operating. Firstly, in order for the firm to receive the initial loan it has to have its statutes approved by the CNPS. As it was mentioned above, these statutes have to include wage scales and premia. Moreover, any change in them will have to be sent to the CNPS for approval. This fact will undoubtedly create tension between the CNPS and the firms acting in many ways in a union-like manner. Another wage control mechanism operates when the firm cannot comply with the terms of the agreement for the amortization of the loan. In this case an »economic recuperation plan« has to be submitted to the FNPS. The plan will include if necessary cuts in wages. The FNPS can approve or modify the plan; its decision being final and unappealable. However, controls on salaries do not diminish the superiority of average income per worker maximization as a behavioural rule for the Peruvian social property firm. It just places a constraint on one component of income. Thus one can still postulate maximum average income per worker as a viable rule. Income in this framework will be composed of a wage element and a surplus element. Therefore with fixed wages the rule is equivalent to the maximization of distributable surplus per worker. It is equivalent because it will produce the same level of output, employment, and input levels. In Figure 1a. simple total revenue function is shown. If the output price is constant it will have the same shape as the production function which in this case is assumed to have diminishing returns to scale beyond a certain level of employment. So,

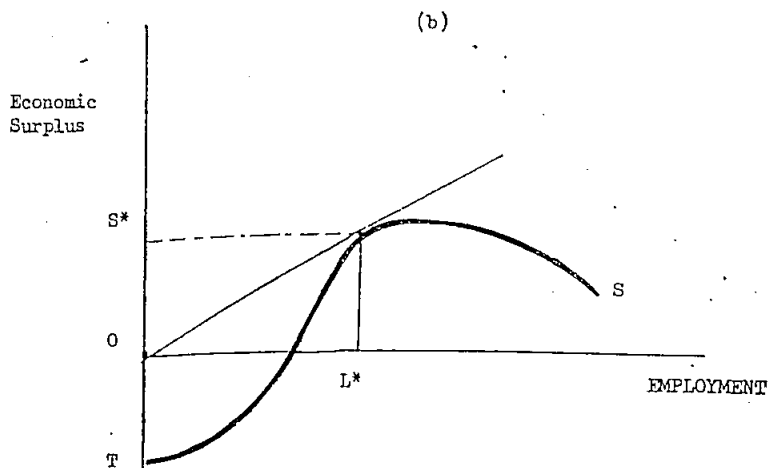
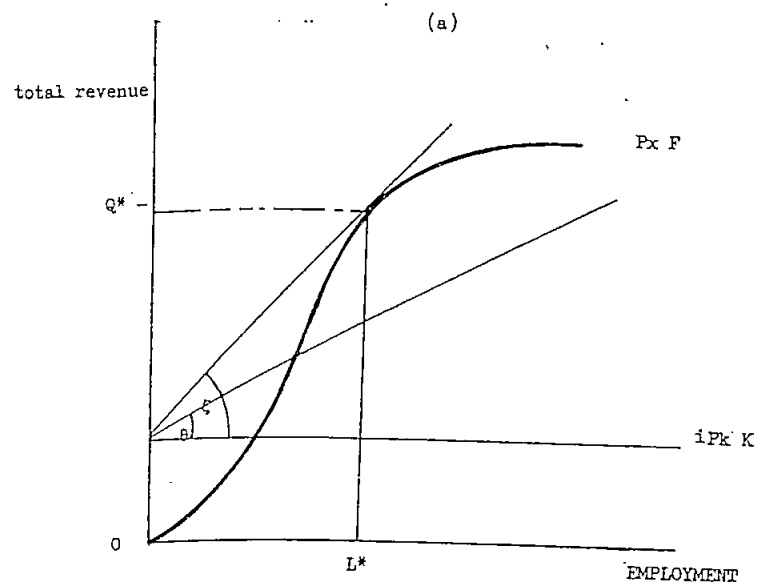
$$X = F(\bar{K}, L)$$

where X is the level of output and K and L are flows of capital and labor services. In this case we consider the short run where capital services are fixed and equal to $iP_K K$; the total rental for hiring K . If wages were to be freely determined by the workers, they would choose an employment level L^* thus producing an output of Q^*/P_X units and zero distributable surplus and receiving an average income per worker equal to $\tan \xi$. If on the other hand wages are predetermined

⁴⁾ In order for a worker to vote in favor of a proportional wage increase the following condition must be satisfied

$$\omega > \frac{(1-t)(1-\gamma) \sum_1^n \omega_i}{n}$$

where ω is the wage of the particular worker, t is the firm's income tax rate, γ is the share of *accio-bonos* in total capital. Clearly if t and γ are high, the majority of workers will favor the wage increase.



(say at a level equal to $\tan(\theta)$) the workers will want to produce Q^*/P_x and employ L^* because at those levels of employment and output the surplus per worker and consequently the «worker's rent» per worker are maximized. This is shown in figure 1.b where TS is

constructed as the vertical difference between the total revenue and the total cost curves when wages are fixed at $\tan \theta$. Maximum surplus per worker is achieved when the total economic surplus is S^* and employment L^* .

IV. CAPITAL INTENSITY, EMPLOYMENT, AND INCOME DISTRIBUTION

The Peruvian Social Property Sector (*Sector de Propiedad Social*, SPS) has been conceived by the government as a means to achieve society's development goals and more fundamentally as a strategy for growth based on the predominance of a new form of decentralized economic organization within which social accumulation will constantly widen the base for distributing the national means of production thus alleviating and eventually solving the problems of unemployment and income inequality.

In general terms one could list a number of conditions that provide for the achievement of these goals. I will concentrate on those conditions that can be considered most crucial.

- (i) The cost of employment of one person is lower in the SPS than in the rest of the economy. In other words, capital-labour ratios are lower.
- (ii) There exist mechanisms that distribute capital and/or its benefits over an expanding base.
- (iii) Growth generated by the SPS is greater than that which would be experienced if the sector did not exist.

(i) Within the framework of the law, capital-labor ratios have to be analyzed at different points in the time since the FNPS can clearly determine their *ex-ante* values through the process of approving or rejecting investment projects. But after the firm is established, the technological characteristics of new investment, are decided upon by the workers. Even though the FNPS will be inclined towards the selection of low K/L ratios, its decisions will most probably be constrained by the choice of techniques available for the production of certain goods imposed upon Peru by the Andean Common Market programs. A good referential K/L value (approximately 250,000 soles) is the one which is prevalent in Peruvian manufacturing.⁵⁾ This figure, however, represents the global K/L ratio and obviously does not include the infrastructure that will have to be provided if one is speaking of a new sector. It is clearly feasible to add a number of industrial plants without congesting the infrastructure but it is impossible to keep growing if no new power plants, roads, housing, etc. are provided.

Once the decisions regarding new investment rest in the hands of the workers, the question of technological choice becomes perhaps

⁵⁾ Calculated from *Estadística Industrial. Datos Preliminares 1971. Ministerio de Industria y Turismo.*

(One dollar = approx. 40 soles).

the most crucial issue affecting the performance of the firm and the Sector as a whole. The law specifies that after the initial loan has been paid out to the FNPS or COFIDE the firm will continue to deduct payments similar to the average amortizations made in the five years of greatest payments. These funds are earmarked for investment and will be used by the firm if it has an approved reinvestment plan. Since they originate in the firm there is no interest nor amortization involved. Then it is clear that the opportunity cost of those funds is close to zero since they cannot be distributed among workers. It can easily be shown that under these circumstances the workers will choose the highest K/L ratios available to them. Their subjective cost of capital is so low that there is no incentive to bring new members into the firm to »help pay« for it. With this behaviour workers achieve a double objective. On one hand by increasing output without increasing employment, they can increase their income; on the other, they can accumulate more and invest in more capital-intensive techniques. On the extreme, the number of workers can even diminish if mechanization persists and workers retire or die.

(ii) The above discussion leads us to this second proposition which can be analyzed in the light of the economic mechanisms just explained. The income redistribution question is viewed in this context as the problem of how to divert productive resources towards the groups in the economy which have little or no capital. As it was said before the sectorial accumulation of capital and growth of output do not guarantee or promote higher employment. This undesirable outcome takes place because of the reliance on self-financing by the firms in the Sector coupled with the absence of an effective mechanism to price capital according to its intrinsic scarcity. Such a mechanism would have to operate so as to effectively siphon-out returns to capital. This, of course, is easier conceptually than in practice, but if no action is taken to correct the drawback the concentration and not the diffusion of the means of production will be the most likely outcome. A tax on capital and/or land would probably be the best instrument. Or, in the context of the law, amortization could be replaced by a permanent rental payment for the use of capital which could in turn be used as a powerful policy instrument. Thus, capital would be employed by the firm only to a degree compatible with its cost to society and widening the employment would be the best course for the firm to follow. As a result, no matter how high is the accumulation rate that society imposes on social property firms it will be expected to cause efficient growth in employment and therefore have the desired effect on the distribution of income.

(iii) Whether the new Sector will grow at higher or lower rates than the rest of the economy remains to be seen. However, one can observe which approximate rates of accumulation lay implicit in the law. In addition looking at wage control and entry policies it should be possible to predict the order of magnitude of the sectorial growth rate and its effect on the global rate of growth of the economy.

Among other things, the Sector's growth rate will be a function of the interest that the FNPS will charge to the individual firms, as well as of the amortization schedule and the rate of taxation. According to the law, amortization and interest will be set selectively and on a case by case basis and the growth of the sector will be altered accordingly. If amortization is scheduled to take place over a »normal« period of time and interest rates reflect capital scarcity, it is reasonable to expect gross accumulation to be in the neighborhood of 25% annually. This could mean that the new sector could grow at rates as high as 15%. Another way by which the sector as a whole could increase its growth rates would be by shifting forward to the consumer the burden of accumulation in the form of higher prices. But this assumes the widespread existence of monopolistic forms and the ability of the regulatory agencies to appropriate excess profits without extracting all rents and causing serious allocational inefficiencies.

V. GROWTH POTENTIAL AND PREDOMINANCE

Throughout the discussions that preceded the creation of the Social Property Sector and after the law was issued the Peruvian Government repeatedly emphasized that this new form of economic organization is to become the dominant form within a pluralistic economy. In the framework of a market economy, the terms »dominant« and »pluralistic« clearly raise the issue of their being consistent with one another. Notwithstanding the importance of this question we shall here concern ourselves with another problem, namely, that of bringing to the surface the underlying conditions necessary for the Social Property Sector to become predominant within Peru's economy and the likelihood of this happening at alternative points in time.

From the outset, it is important to emphasize the rather obvious fact that the growth of a new sector within the economy can only take place at the expense of diminished growth in other sectors. New internal or external savings can be used to create a new sector but clearly those funds could also be applied to the existing sectors. Of course, this does not negate productivity differences across sectors.

To deal with our problem I will use two approaches. The first is to postulate alternative levels of investment in the SPS in different years and derive, basically using capital-output coefficients, the sectorial level of output which in turn is compared with a given year's GNP to determine the sector's relative importance in the economy. The second approach postulates alternative GNP growth rates and ascribes to the SPS or the rest of the sectors in the economy, all or part of the overall growth. In addition, the initial level of investment in the SPS, implied by the growth rate, is obtained.

The first approach is applied under three alternative hypotheses and the results are presented in Appendix Table A—1. All three cases assume that the growth rate of the SPS is 10% while the rest of the economy (RE) grows at 6%. Furthermore, the capital-output ratio

is made equal to 2. In the first case the SPS is endowed with 5,000 million soles and each year there is 2,500 million of new investment. After 20 years the SPS represents 8.02% of total GNP. In the second case the SPS is endowed with 5,000 million and 1% of the product of RE is diverted towards the SPS. After 20 years the SPS is producing 15.21% of GNP. Finally it is assumed that there is new investment of 10,000 million per year until the fifth year. In this case the percentage share of the SPS in the GNP will be 14.04%. These three examples contain the perhaps inadequate assumption that the rest of the economy maintains its postulated 6% growth rate even after a substantial part of total investment is diverted towards the SPS. As can be observed, the SPS would not achieve a significant size in less than 20 or 30 years in spite of massive transfers of resources.

The second approach⁶) introduces explicitly the trade-off between the SPS and the rest of the economy. The results hinge on the assumption about global growth and the growth that one is willing to forego in the rest of the economy. Two sets of calculations are performed, postulating global rates of 6% and 10% and assuming alternatively that the rest of the economy grows at 0.0%, 3.1%, 5.0% and 7%. The value of the capital-output ratio is maintained equal to 2.0. The results are shown in Appendix Tables A-2 and A-3 which also provide a calculation of the required implicit initial investment levels in the SPS. In these examples the SPS gains predominance in 15-20 years only if one assumes a very high overall growth rate and the rest of the economy is stagnant or allows only a very small growth rate.

All calculations, presented above, point out the difficulties of reaching the predominance goal unless massive conversion of firms from other sector to the SPS is encouraged. There exists in Peru a Cooperative Sector (mainly in Agriculture) that produces between 6 and 10 per cent of the GNP that could be assimilated into the new SPS thus helping to achieve the critical mass that is needed in order to ensure sustained growth. Whether this or similar measures are adopted remains to be seen but in the light of our previous discussion it is likely that they will be fundamental for the new sector to grow and eventually gain predominance in the Peruvian Economy.

VI. SUMMARY AND CONCLUSIONS

In the preceding sections an attempt has been made to analyse the Peruvian Social Property Law vis-a-vis the underlying economic mechanisms that will inevitably operate in the environment of a market economy.

The model of the worker-managed firm embodied in the Law relies heavily on a set of institutions that will regulate the new emerging sector. Among the most crucial functions performed by these institutions will be the functions of regulating the entry of new firms

⁶) Originally worked out jointly with Dr. Peter Knight.

and controlling the essential parameters that will enable society to promote its development goals through the creation of this new sector. The way in which controls are performed will clearly have an effect on the extent of self-management itself. The Law seems to have a profound bias in favor of ad-hoc regulation; signs of this being present basically in the provisions regarding amortization, interest and wage control. This fact places an enormous burden on the regulatory agencies, mainly the CNPS, the NFPS and COFIDE, which will have to develop extremely well-functioning technocratic cadres in order to approach rationally the administrative problems that will necessarily arise. On the other hand, the very presence of case by case regulation precludes to a significant extent the use of a market mechanism which is to promote better allocation of resource. There are however a number of very basic decisions that the manager of a social property firm and its working collective will have to make (particularly regarding the level of output and the size of the labor force) in order to set up the behavioural rules of the firm. From the analysis in section III we can conclude that even in the presence of wage controls, maximization of average income per worker remains the most likely basic behavioural rule. In the context of the Law this rule is transformed into the maximization of »economic surplus« per worker. As a result, short-run employment decisions will not be affected by wage controls. Furthermore, in view of our discussions about reinvestment and the subjective cost of capital, it can be argued that if the relative price of capital is affected by wage controls, factor proportions will not be influenced by either wage or interest controls even in the long run.⁷) Thus, in the framework of the Peruvian Social Property Firm the drawbacks of self-financing are magnified. This problem is all the more difficult in view of the fact that solutions to it would have to be of the ad-hoc variety but now touching the realm of the firm's employment-output decisions which cannot be done without damaging the principle of self-management.

The Law provides for highly emphasized accumulation and rates of growth within the SPS vastly superior to those now prevalent in the Peruvian industrial sector. But the issue of predominance of the SPS within the economy remains basically unresolved depending crucially on the size of investment funds that will be channeled to it and also on whether conversion of existing firms will be allowed. If the cooperative sector is integrated into the SPS, the critical mass that is needed will most probably be reached. But more fundamentally the success of self-management will depend on the way in which Peruvians will meet the challenge of development by means of this new alternative. The workers in the SPS will then become the most important agents in the development process; they will be willing to divert from group egoism towards accepting the challenge of accumulation and expanding employment.

(Rad primljen jula 1974.)

⁷) Unless a substantial part of reinvestment is done through new »Initial Loans«.

APPENDIX Table A-1

SIMULATED GROWTH OF THE SOCIAL PROPERTY SECTOR

(million soles)

	Year*	SPS	RE	SPS/GNP
Case 1	5	9,461	378,743	2.43
	10	22,869	506,843	4.32
	15	44,462	678,271	6.15
	20	79,238	907,679	8.02
Case 2	5	11,675	378,743	3.08
	10	32,468	506,843	6.40
	15	70,577	678,271	10.40
	20	138,135	907,679	15.21
Case 3	5	30,525	378,743	8.05
	10	49,161	506,843	9.69
	15	79,175	678,271	11.67
	20	127,512	907,679	14.04

1974 is used as the initial year.

GNP = 300,000 million. Total investment = 40,000 million. Approx. figures from the Instituto Nacional de Planificacion.

APPENDIX Table A-2

RELATIVE SIZE OF THE SOCIAL PROPERTY SECTOR AND REQUIRED INITIAL INVESTMENT WHEN GLOBAL GROWTH IS 6%.

(Percent)

Year	RE		GROWTH	
	0.0%	3.1%	5.0%	
0	0.0	0.0	0.0	
5	25.4	12.7	4.5	
10	44.1	24.0	8.9	
15	58.3	34.2	13.3	
20	68.9	42.5	17.2	
Required Initial Investment (Million Soles)	36,543	17,663	6,091	

APPENDIX Table A-3

RELATIVE SIZE OF THE SOCIAL PROPERTY SECTOR AND REQUIRED INITIAL INVESTMENT WHEN GLOBAL GROWTH IS 10%

(Percent)

Year	RE		GROWTH	
	0.0%	3.1%	5.0%	7.0%
0	0.0	0.0	0.0	0.0
5	37.0	27.9	21.1	13.8
10	61.3	47.8	37.4	23.9
15	76.0	62.1	50.3	33.8
20	85.1	76.6	60.5	42.4
Required Initial Investment (Million Soles)	60,905	42,025	30,453	18,272

EKONOMSKA ANALIZA ZAKONA O DRUSTVENOM VLASNISTVU U PERUU

Roberto ABUSADA-SALAH

Rezime

Rad predstavlja pokušaj analize Zakona o društvenom vlasništvu u Peruu u uslovima tržišne privrede.

Model samoupravnog preduzeća koji je obuhvaćen Zakonom zaniva se na nizu institucija koje će regulisati novonastali sektor. Među najznačajnijim funkcijama ovih institucija su funkcija regulisanja nastajanja novih preduzeća i funkcija kontrolisanja osnovnih parametara koji omogućavaju društvu da se razvija kroz novi sektor. Način kontrole će, bez sumnje, biti od uticaja na domot samog samoupravljanja. Zakon izgleda naklonjen ad hoc propisima; ovakvih propisa već ima u domenu amortizacije, interesa i kontrole plata. Emisija ad hoc propisa zahteva velike napore od strane CNPS (Nacionalne komisije o društvenoj imovini), NFPS (Nacionalnog fonda za društvenu imovinu) i COFIDE (Banke za nacionalni razvoj), koji treba da raspolazu sa vršenim tehno-kratskim kadrom da bi bili u stanju da se nose sa administrativnim problemima koji se pojavljuju. S druge strane, samo prisustvo ad hoc propisa, isključuje u velikoj meri upotrebu tržišnog mehanizma koji treba da doprinese boljoj alokaciji resursa. Direktor i kolektiv društvenog preduzeća treba, međutim, da donesu izveštaj

broj osnovnih odluka (posebno u vezi sa nivoom proizvodnje i obimom radne snage) da bi odredili pravila ponašanja preduzeća. Iz analize u trećem odeljku može se zaključiti da, čak i uz prisustvo kontrole plata, maksimizacija prosečnog dohotka po radniku jeste, po svoj prilici, najosnovnije pravilo ponašanja. U kontekstu Zakona ovo pravilo se transformiše u maksimizaciju »privrednog viška« po radniku. Iz ovoga sledi da kratkoročne odluke o zapošljavanju neće biti remećene kontrolom plata. Osim toga, u svetlosti naše diskusije o reinvestiraju i o subjektivnoj ceni kapitala, može se tvrditi da kontrola cena i interesa neće uticati na dugoročne proporcije faktora ako ova kontrola utiče na relativnu cenu kapitala*). Sve to dovodi do porasta nedostataka samofinansiranja u okviru peruanskog društvenog preduzeća. Ovaj problem se još više komplikuje donošenjem ad hoc rešenja koja ne zalaze u sferu odluka o odnosima zaposlenosti i proizvodnje u preduzeću, što se ne može činiti bez povrede principa samoupravljanja.

Zakon obezbeđuje jako naglašenu akumulaciju i stopu rasta u okviru sektora društvene imovine, mnogo veću od one koja sada postoji u peruanskoj industriji. Međutim, pitanje dominacije sektora društvene svojine u privredi ostaje u osnovi nerešeno, ono zavisi uglavnom od obima investicionih fondova koji su kanalisani prema njemu i od toga da li će se dozvoliti prelaz postojećih firma iz privatnog u društveni sektor. Ako se zadržni sektor integriše sa društvenim sektorom neophodna masa društvenog sektora će najverovatnije biti dobivena. Ali uspeh samoupravljanja će u najvećoj meri zavisiti od odziva na koji ova nova alternativa razvoja naiđe kod Peruanaca. Radnici u društvenom sektoru postaju najvažniji instrumenti razvojnog procesa koji zavisi od njihove spremnosti da odbace egoizam grupe i prihvate izazov akumulacije i porasta zaposlenosti.

PROBLEMS OF REGIONAL ECONOMIC DEVELOPMENT IN YUGOSLAV THEORY AND PRACTICE

Marta BAZLER-MADZAR*

Institutional Development

The post-war Yugoslavia inherited an underdeveloped economy with a highly heterogeneous regional structure. The northern and north-western parts of the country were considerably more developed than those in the south and the east. Owing to different historical conditions in the past, among which we can list the different directions of the spread of industrialization in Europe and different socio-economic systems of the empires ruling over the territories forming present-day Yugoslavia, and owing to the strong polarization of development between the two wars, two types of areas developed: those which were partly industrialized and others with traditional economic structure (1, pp. 14—16). While the more developed areas had the basic prerequisites for industrialization, conditions for the development of a modern economy were sadly lacking in the underdeveloped areas. As a result, the policy of development of underdeveloped areas was faced with a highly unfavorable dualist structure of the economy, having two substantially different types of areas whose development was to be synchronized.¹⁾

Society's active involvement in the problems of development of the underdeveloped regions, as seen in the policies favouring an accelerated development of those areas, was one of the basic characteristics of the economic policy throughout the post-war period. In line with its basic aim — rapid development and overcoming of economic backwardness — accelerated development of the underdeveloped areas became an important element of development policy. As pointed out by R. Bićanin (2, pp. 182—184) four important reasons have determined this policy. To begin with, the purely humanitarian aspect of disparity strongly militated against impermissible differences in the living conditions of the population. Furthermore, the underdeveloped regions made a very large contribution to the country's liberation in the cour-

*) Osim-kad se znatan deo reinvestiraju sprovodi preko novih početnih investicija.

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¹⁾ The per capita national income figures given in Table 1 are also indicative of the marked regional differences.